

AN INVESTIGATION INTO THE THEORETICAL FOUNDATIONS OF
LIBRARY CATALOGUING AND A CRITICAL ANALYSIS OF THE
CATALOGUING OF THE SOUTH AFRICAN NATIONAL BIBLIOGRAPHY

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ABSTRACT

This thesis proposes that the foundations of the library catalogue are not rooted in a coherent, encompassing and comprehensive theoretical structure. Instead, it shows that it rests upon a number of principles that evolved during the nineteenth century from the work done by cataloguing experts such as Panizzi, Jewett and Cutter. These principles are shown to be either principles of access or of bibliographical description, and they still form the basis for the construction of modern catalogues according to the Anglo-American Cataloguing Rules, 2nd edition (AACR2).

The South African National Bibliography (SANB) is then used as an example of an actual catalogue constructed according to the AACR2. A study is conducted of the cataloguing records in the SANB in order to establish how these Rules are put into practice, and how usable a catalogue may be produced according to these Rules and principles. It is concluded that the SANB is a high quality catalogue according to the standards set by the AACR2, but that such a catalogue may not be optimally useful from the point of view of the user.

Certain ideas from Artificial Intelligence are then employed to find out to what extent a user is able to utilize the library catalogue as a channel of communication in order to gain maximum benefit from the information available in the catalogue. It is found that the user is indeed not equipped to make full use of the catalogue, and it is suggested that the potential for increased access facilities brought

about by computer technology may be employed to bridge the communication gap between the user and the cataloguer.

The thesis therefore concludes that the established principles according to which catalogues are constructed, are inadequate for the formulation of a comprehensive theory of cataloguing, but a search for such a theory is shown to be ultimately inappropriate. Cataloguing is essentially a problem-solving pursuit which aims at the production of a tangible object; a usable catalogue. Modern computer technology has brought the library catalogue to a crossroads in its development, and a detailed study of user needs will have to form the basis for the development of additional principles according to which the new technology will most successfully be applied to library catalogues.

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1. INTRODUCTION

1.1 Theories of Cataloguing

Library literature abounds with work on catalogues and cataloguing (see Appendix, Selected Bibliography), but only when one starts to search the literature does it become apparent that it is very difficult to find a clear and simple statement of what a theory of cataloguing may be. There seems to be general acceptance that such a theory does indeed exist and that catalogues are compiled according to sound intellectual and theoretical principles rather than for purely pragmatic reasons. However, a brief, succinct and comprehensive statement of theory seems strangely elusive in spite of the work of eminent writers such as Cutter, Lubetzky, Gorman, Malinconico and many others who have concerned themselves with this problem and who often refer to apparently generally accepted and understood theories and principles of cataloguing.

In this work therefore, the researcher wishes to investigate this problem of the elusive theory of cataloguing which seems to be assumed to exist and yet is never clearly and concisely formulated. Kuhn (1970: 7) for example, regarded a scientific theory as a reconstruction and re-evaluation of prior fact into an all-encompassing and provable hypothesis that provides a rational explanation of an entire phenomenon, and it is in this sense that a theory of cataloguing seems to be missing.

1.2 Statement of the Problem and Hypotheses

In the course of the investigation the researcher proposes to query the validity of this apparently generally held assumption that a theory of library cataloguing exists, that it is closely connected to the aim and purpose of a catalogue, and that such a theory may be extracted from an in-depth consideration of the catalogue itself and its development and functions. The point of departure will therefore be the following main hypothesis:

a general encompassing theory of cataloguing does not exist because of the very nature of the library catalogue and the activities involved in the construction of such a catalogue.

The researcher does, however, recognise that high quality catalogues need to take into account the well-established approach to bibliographic phenomena frequently referred to in the literature as "theories of cataloguing". This study will therefore refer to these as principles of cataloguing, principles of authorship, etc. in the sense that Gale (1979: 177 - 180) uses the word principle as the most fundamental proposition in a logical structure. Gale states that laws and hypotheses (and therefore theories, which according to Popper (1976: 81), essentially remain hypotheses however well they are tested) are based on principles, they are not themselves the principles.

In addition to investigating the main hypothesis, the researcher proposes that the present study will be conducted on the basis of the

following sub-hypotheses:

- (i) Cataloguing rules are based on principles.
- (ii) The Anglo-American Cataloguing Rules, 2nd edition (AACR2) reflect attempts to codify these principles.
- (iii) Specifically South African cataloguing problems have affected the South African interpretation of the AACR2.
- (iv) The entries in the South African National Bibliography (SANB) may be regarded as examples of library catalogue records based on AACR2.
- (v) Certain cataloguing problems remain unsolved by AACR2.
- (vi) Catalogues constructed according to present codes are not fully serviceable from the point of view of the user.
- (vii) Established principles of cataloguing are inadequate for the construction of computer-based catalogues.

1.3 Methodology

These hypotheses will be investigated by means of a study consisting of the following approaches:

- (i) a review of the historical development of the library catalogue (see chapter 2);
- (ii) a discussion of attempted formulations of existing cataloguing "theories" and principles (see chapter 3);
- (iii) a consideration of the actual problems encountered in library cataloguing, and their solutions in terms of modern cataloguing rules (see chapter 4);
- (iv) an analysis of the requirements of the user of the catalogue

(see chapter 5).

The rationale for the methodology as outlined above may briefly be set out as follows:

The study of the library catalogue in its development during the past 150 years, is an attempt to establish what the originators of the library catalogue as we know it today, tried to achieve. Once the historical development is broadly understood, it becomes possible to look more closely at the theories and principles of cataloguing that were expounded during this time. It is then also possible to ask if and how the functions of the catalogue were affected by technological developments in catalogue production during the past 100 years. Only once the origin and development of the past and present "theories" or principles of cataloguing are understood in their practical and historical context, does it become possible to enter what Popper calls the "scientific or critical phase of thinking" (1976: 60) in which existing hypotheses are questioned and if possible replaced with new propositions.

The analysis of the interpretation of the principles of cataloguing which follows, is an attempt to understand both the problems and the solutions encountered in actual catalogues. This is necessary to show what kind of catalogue may be produced by existing "theories" or principles of cataloguing.

To achieve this the researcher studied the physical manifestation of

an actual library catalogue. An investigation was conducted of the cataloguing in the South African National Bibliography, which publishes catalogue records for most items received by the State Library under the provisions of the South African Copyright Act. The cataloguing records are generally recognised to be of a high quality according to the rules laid down by the Anglo-American Cataloguing Rules, second edition (AACR2) 1978. These rules may be regarded as the distillation of cataloguing principles and practice in the Anglo-American cataloguing world during the last 150 years, and have been internationally recognised as a cataloguing standard. One may therefore safely assume that the cataloguing records of actual documents, officially approved by a national library such as the State Library (as opposed to the sometimes individualistic interpretations by a small number of cataloguers in an individual library), could be regarded as the best available example of library cataloguing as it is practised in South Africa today. (See also 4.1).

This study of actual catalogue records as embodied in the SANB was done to explore the problem areas in library cataloguing and to show how the most modern code of cataloguing rules based on the traditional principles of cataloguing (AACR2) copes with those problems areas. From such a study it will become possible to show which problems are still unsolved, and to what extent a "perfect" catalogue in the traditional sense is able to bridge the communication gap between user and compiler of the catalogue; in other words one may discover whether traditional catalogues have indeed been structured according to an encompassing theory of cataloguing that 'provides a rational

explanation of the entire phenomenon'.

The survey of principles and practice, however, provides a one-sided view of the library catalogue: an assumption seems to exist that the functions and principles according to which catalogues should be constructed, produce catalogues that general library patrons find easy to use. Such an assumption should be investigated.

Finally therefore, the researcher proposes to study the user of the library catalogue; the requirements that the user has of the catalogue, and the extent to which the traditional "theory based" catalogue is able to satisfy the requirements of the user. The researcher will attempt to investigate the degree of communication between the cataloguer and the user in order to discover to what extent cataloguing principles as expressed by our traditional catalogues take into account the needs and limitations of the user. The existing principles of cataloguing will therefore be investigated to see how far they encompass the requirements of the cataloguer, the catalogue and the user. This aspect of the study will show to what extent the expounded principles of cataloguing affect the usefulness of the catalogue from the point of view of the user, and aims to enquire whether traditional catalogues based on principles do in fact live up to the assumption that catalogues are easy to use.

The study will be conducted by means of a conceptual analysis of the existing literature. The researcher intends to examine firstly the published literature on cataloguing in general and the AACR2 in

particular, and to apply any findings to a critical evaluation of the cataloguing in the South African National Bibliography.

For this purpose the researcher has scrutinised the Library and Information Science Abstracts (LISA) and Library Literature: an Index to Library and Information Science for relevant publications, and followed up appropriate citations from the literature itself. The Union Catalogue of Theses and Dissertations of South African Universities was searched. In addition, the Annual Review of Information Science and Technology, provided valuable review articles, as did the annual articles entitled Descriptive Cataloguing in 19- that regularly appear in Library Resources & Technical Services. The selected bibliography appended to this work will not reflect all items retrieved and studied; but only those that were found to be directly relevant.

English language publications turned out to be most useful, as the impact of the Anglo-American Cataloguing Rules 2nd ed. was first felt and rationalized in the English-speaking library world. The researcher then decided to limit the literature survey to English and/or South African sources as the AACR2 is a set of rules for the construction of English language catalogues. Non-English articles were found to concern catalogues in other languages, thus introducing extraneous or irrelevant elements into the study. This study will concentrate on English language criticism and the South African interpretation of the AACR2.

Chapter 5 of this work is based on certain findings from the discipline of Artificial Intelligence which the researcher found relevant to the present study of the library catalogue. An introduction to Artificial Intelligence was provided by the 3-volume work The Handbook of Artificial Intelligence (1981 - 1982), which presented the subject in a clear, concise and comprehensible form, together with abundant references to other sources. This work then provided the springboard for the literature survey on Artificial Intelligence, on which chapter 5 of this work is based.

1.4 Operational Definitions

As certain terms will be used a great deal, the researcher proposes to define at the outset what, within the framework of this study, will be implied by these terms. Such a set of definitions may also serve as a point of reference, so that it will not be necessary to refer the reader to these definitions in the course of the text.

The concept of cataloguing should be clearly delineated. In this study the term will specifically refer to library cataloguing. A catalogue is constructed by collecting and arranging bibliographic records of the items held by the library. A bibliographic record consists of all the information necessary to describe and identify uniquely a particular item in the library, and of information regarding its location in the collection, presented in a standardized format (Wynar, 1980: 2). The catalogue is in other words a data base (a collection of records structured according to some coherent,

logically consistent framework) containing facts referring to the bibliographical manifestation of the document such as author, title, publisher, date, etc., together with subject descriptors and location information. It is compiled by cataloguers according to strict rules set out in cataloguing codes. Such codes, of which the AACR2 is the generally accepted one in use in the wider Anglo-American community today, attempt to formalise and standardize the access to and bibliographic description of library materials. The functions that catalogues are required to fulfil, were succinctly set out by Cutter in 1904 (see 2.2 of this study) and more recently by Malinconico:

"... the basic functions expected to be served by the catalog have not altered, and indeed have been reendorsed after a century of experience. In simple terms the catalog should (1) provide access to a predefined item in the collection; (2) organize the collection; (3) attribute authorship responsibility, when possible, to a work; and (4) assist the user with information regarding its own organization." (Malinconico 1979b: 48).

Catalogues are compiled for users who are expected to be able to use them with little professional intervention apart from a certain degree of initial introduction. Users frequently have little knowledge regarding the principles according to which catalogues were constructed.

Traditionally one may distinguish between two large general catalogue forms; the dictionary and the classified catalogues. The dictionary catalogue relies on alphabetical subject headings for subject access to items in the catalogue. The classified catalogue uses the subject arrangement of the classification scheme operative in

the library as the basis for subject access in the catalogue. Such a classified sequence requires the addition of a separate alphabetical index for the user to be able to access the items in the library by subject.

Catalogues are closely related to bibliographies in that the same principles should be used for their compilation (Hunter & Bakewell, 1979: 21); and they are required to fulfil very similar functions in providing access to and identification of listed documents. Library catalogues, however, list the contents of individual libraries while bibliographies attempt to list all materials within larger geographic, subject or linguistic limitations. The South African National Bibliography for example, attempts to list all the works published in South Africa. It is compiled strictly according to the AACR2 and as such it is suggested that its bibliographic records be employed in this study as examples of library catalogue records.

It may also be added that another important function of a library catalogue is to inform a user of the location of a particular item held by the library. A bibliography, as its name implies, provides bibliographical or descriptive information. The SANB is not a union catalogue; a catalogue indicating which of a number of libraries participating in a particular 'union' holds a particular item; it therefore provides no location information regarding any of the items listed. The effects of the differences between catalogues and bibliographies will be discussed in 4.2.

A definition of theory has already been stated as an all-encompassing and provable hypothesis that provides a rational explanation of an entire phenomenon (Kuhn, 1970: 7 - 8). A general theory of cataloguing will therefore mean a hypothesis that takes into account the entire phenomenon of cataloguing, including not only the construction of the catalogue and its function as perceived by the cataloguer, but also its usability from the point of view of its users. The criterion for the existence of a "theory of cataloguing" will therefore be whether or not any proposed "theory" attempts to circumscribe the phenomenon in its entirety.

It is discernible in the literature, however, that writers have referred to theories of cataloguing rather more loosely, usually in the sense of limited rational explanations for bibliographic phenomena such as in "theory of authorship" or "theory of bibliographic description."

As stated in 1.2, such loosely termed "theories" may be interpreted as principles of cataloguing, which may be defined as the fundamental propositions upon which hypotheses and thus also theories may be built. See also 1.2. When principles then turn out to be false, associated hypotheses will necessarily be false as well (Gale, 1979: 178). A number of principles together form the fundamental basis for the construction of a set of laws on which in turn a hypothesis may be built.

Other concepts that are less germane to the nucleus of the thesis,

but that nevertheless require explanation, will be defined where they first crop up, and will be referred to where necessary.

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2. THE HISTORY OF CATALOGUING - A BRIEF SURVEY

2.1 From Inventory to Finding List

It seems fairly safe to assume that sizeable collections of writings have been accompanied by inventories or contents lists since the earliest times. From archaeological excavations at the library of Assurbanipal (668 - 626 BC) it has become clear that "a rudimentary shelf list" existed on clay tablets which served as a "crude location device" as it recorded cataloguing details such as the titles of the works, the number of tablets, the number of lines, together with a kind of location or classification mark to identify the work (Encyclopedia of Library and Information Science, vol. 4, 1970: 246).

Until the invention of printing with movable types during the fifteenth century in Europe, book collections were never very vast and a rather casual approach to cataloguing was sufficient to ensure adequate control over existing collections of writings. By the twelfth century the catalogue was frequently an "inventory list" (op. cit.: 249) fairly unsystematically compiled on a parchment page in two columns. Arrangement was broadly by subject in the first place, and then by title arranged chronologically, rather than alphabetically by author. The name of an author was mainly used for purposes of identification and not much attention was paid to its formulation (ibid.)

As the printed word began to spread over Europe, it was inevitable

that libraries would be affected and that the old inventory approach would become inadequate. Sir Thomas Bodley, the founder of the Bodleian Library in Oxford may have been the first to realise that a library catalogue had to do more than summarise the contents of the collection. Seymour Lubetzky explained this clearly and entertainingly:

...about 1598, Sir Thomas Bodley was preparing to go on a book-buying expedition for the library. To avoid dissipating funds on unnecessary duplicates, he asked the librarian Thomas James to provide him with a copy of the catalog of the library. At that time the catalog consisted of a collection of inventory lists... Not surprisingly, when Bodley began to use these sheets to determine whether the books he had selected for purchase were not already in the library, he soon found that the inventory lists were not quite adequate for his purposes... the entries were too brief and often left him uncertain as to whether the books he had selected for purchase and those he found in the catalog were of the same editions. Worse, that the failure to enter books bound with other books separately, in addition to their listing under the first book, would normally cause one to miss them. (Lubetzky, 1979a: 5 - 6)

The library catalogue then, had a further function to fulfil: it had to be a finding list which could tell the prospective user whether or not the library possessed a very particular work. This function was to become increasingly important and marks the next evolutionary stage in the development of the catalogue as we know it (ibid.).

* The nineteenth century may be regarded as the beginning of the modern era as far as cataloguing is concerned, in that cataloguing, hitherto a rather ^{liberal} haphazard activity, now became subject to codification. According to the Encyclopedia of Library and Information Science (op. cit.: 262) this was a century of codes, and a number of major

works applicable to the Anglo-American context originated in Great Britain, Europe and the United States, as did many separate sets of rules which were noted in the introductions to numerous individual catalogues. Very briefly, three of the most important codes relevant to the Anglo-American situation that were produced in this period are discussed below:

"Rules for the Compilation of the Catalogue", British Museum 1841.

This set of rules was drawn up by a committee set up by the British Museum in 1839 and most clearly bore the mark of Anthony Panizzi, the Keeper of the Printed Books. Known as the "Ninety-one rules of Panizzi", they were primarily concerned with the method of arrangement of the catalogue, and the difficulties inherent in the choosing and formulating of headings under which 'titles' were to be entered and then filed alphabetically. The Rules were not very concerned with the actual bibliographic description of books (London: 1980: 255).

Panizzi was ardently in favour of the author catalogue, and argued that the name of the author was the most obvious approach for the user. He felt very strongly that a catalogue must not merely be a rapidly compiled finding list (Encyclopedia of Library & Information Science, vol. 4, 1970: 272), and explained this to his critics who felt that his rules were far too elaborate: "The larger the library is, the more you must distinguish the books from each other, and consequently the more fully and more accurately you must catalogue them... A reader may know the work he requires; he cannot be expected to know all the peculiarities of different editions; and this

information he has a right to expect from the catalogues"... (Panizzi quoted by Van Houten, 1981: 363).

Charles Coffin Jewett: Smithsonian Report on the Construction of Catalogs of Libraries, and Their Publication by Means of Separate Stereotyped Titles. With Rules and Examples 2nd ed. 1853.

This was the first cataloguing code to be published in the United States of America. Jewett's rules were much influenced by Panizzi, but were not intended for the catalogue of a single library; he wished to construct a much larger union catalogue to which participating libraries would contribute and which would consist firstly of title descriptions to which headings would be added separately. They would then be reproduced through stereotyping and widely distributed. Many of Jewett's ideas especially regarding standardization, and what is now known as "title unit entry" have once more become extremely relevant today, and traces of them are reflected in the AACR2 after having been ignored for more than a century. The history and development of this concept of title unit entry has eloquently been charted by Tate (1980: 109 - 140).

Title unit entry implies a standard bibliographic description without the addition of a heading, so that the title, which is always the first element of the bibliographic description, becomes the primary access point. Jewett, although he did not actually propagate the idea of title unit entry, effectively produced a catalogue based on this principle.

He required that bibliographic descriptions be prepared first, and once that was done, headings had to be formulated and written in above (Jewett, 1853: 45). He did not regard the catalogue as anything other than a finding list, and stated that users needing information other than that provided by the catalogue should seek for it elsewhere (op. cit.: 10).

His ideas on the standardized reproduction of catalogue entries by means of a stereotyping process were technologically too far advanced for his time, but his cataloguing rules exerted considerable influence on the catalogues of the day.

2.2 A Guide to the Resources of the Library

The most important figure in the history of cataloguing in the late nineteenth and early twentieth centuries; the man who may be regarded as the founder of modern cataloguing theory, was undoubtedly Charles Ami Cutter. His Rules for a Dictionary Catalog. 4th ed. 1904 were influenced by Panizzi and Jewett, but the emphases were different. Cutter was primarily interested in choosing and formulating the access points for authors, titles, subjects and "literary form entries" (London, 1980: 265) in dictionary catalogues. The dictionary catalogue, which was his main concern, was to become the best known form of catalogue in the USA and had a tremendous effect on cataloguing thought both in the USA and the UK. He formulated the basic aims and objectives of a library catalogue so clearly that they have been quoted by cataloguers ever since, viz.:

Object 1. To enable a person to find a book when one of the following is known:

- a) the author
- b) the title
- c) the subject

Object 2. To show what the library has

- d) by a given author
- e) on a given subject
- f) in a given kind of literature

Object 3. To assist in the choice of a book

- g) as to the edition (bibliographically)
- h) as to its character (literary or topical) (Cutter, 1904: 12).

These "Objects" of Cutter's represented a major step in the development of modern cataloguing theory. Object 1 stated the "finding list" principle, mentioned previously, but Objects 2 & 3 introduced a new concept. In addition to assisting the reader in finding a particular work, the catalogue had to be constructed in such a way that the reader could have insight into the way in which the library's collections have been structured by displaying together all the materials which might be related from the user's point of view.

By the early twentieth century there had developed an increasing inclination to Anglo-American co-operation in the field of library cataloguing. The library associations in both countries had been

engaged in revising existing cataloguing rules and Melvil Dewey decided that this was an opportune time to establish some uniformity in cataloguing practice among the English-speaking countries of the world (Encyclopedia of Library and Information Science, vol. 4, 1970: 280). The outcome of this venture was the:-

Catalog Rules (Cataloguing Rules): Author and Title Entries. 1908.

Although this code was a reflection of the first attempt at collaboration between the Library Association and the American Library Association, total agreement could not be reached, and the two associations published slightly differing versions. Cutter's influence was particularly strong in both versions, with rules for Entry and Heading coming before those dealing with bibliographic description.

After 1908 British and American co-operation gradually diminished. In the USA dissatisfaction grew with the 1908 Rules and a preliminary expanded revision was published in 1941 entitled A.L.A. Catalog Rules. Author and Title entries. This, however, was unsatisfactory as well, because it was regarded as too elaborate and was criticised "for attempting to provide a rule for every situation or question that may come up" (Chan, 1981: 6). It was decried as "a violation of the basic principles of cataloging" (Maxwell, 1977: 242) because of being too legalistic; regarding the rules as ends in themselves.

As a result of the widespread objection to the 1941 Rules, but not heeding the substance of the objection to any large extent, Part 1 of

these rules was then revised and published separately as the ALA Cataloging Rules for Author and Title Entries. 1949. The separate publication was a culmination of the preoccupation of cataloguers with specific questions and problems of choice and form of author and title headings (London, 1980: 269). No attempt was made to base cataloguing on principles, as Lubetzky was to point out (see 2.3). The work did not deal with bibliographic description at all, so the Library of Congress publication which also appeared in 1949 as Rules for Descriptive Cataloging in the Library of Congress was accepted by the American Library Association as the substitute for a revision of Part II of the 1941 Rules.

2.3 Seymour Lubetzky Versus the Saber-Tooth Tiger

The so-called "twin codes" were not received any more favourably than their predecessor. They were accused of failing to go back to first principles and failing to take account of the problem of increasing complexity in library cataloguing (Maxwell, 1977: 245). This dissatisfaction was eloquently summarized by Shera: "Cataloguers may find that they are the saber-toothed tigers of librarianship - animals whose failure to adapt themselves to a changing environment becomes the cause of their own destruction" (Shera, 1950: 150).

By this time Lubetzky had already established himself as a penetrating thinker on cataloguing theory, and in 1953 he published Cataloging Rules and Principles: a critique of the ALA Rules for entry and a proposed design for their revision; a slim volume which had a

remarkable effect on the library world.

He "succeeded in slashing his way through the legalistic thicket of rules... in such a way that he managed in the process to demolish many of the long cherished dogmas of the cataloging kingdom. Is this rule necessary? Is it consistent? asked Lubetzky. And methodically... (he) built a devastating framework of improper subordination, illogical reasoning, and misleading examples taken directly from the rules themselves to answer his questions with a resounding "No!" (Maxwell, 1977: 246).

In this work Lubetzky restated Cutter's Objects into two clear objectives for a library catalogue; which may also be regarded as a statement of the functions required of a catalogue.

The first objective, he said (Lubetzky, 1953: 36) was to allow the catalogue user to establish easily whether or not the library had a required book. The second objective was to show the user, under a single form of the name of the author, which works the library had by a given author, and which editions or translations of a certain work it contained.

Lubetzky was also the first to realise that these two objectives are basically in conflict; that it is easy enough to compile a simple finding list, but in order to fulfil the second function, the cataloguer not only has to list a particular work, but because forms of name and titles of different editions and translations may differ, it is also important to establish the identity of the author and the relationships of the work to other works in the collection (op. cit: 37). Working from these objectives, Lubetzky then set out the basic conditions and principles on which cataloguing rules should be based,

and proclaimed "two great principles" that "books whose authors are known should be entered under their authors and those whose authors are not known should be entered under their titles" (op. cit.: 41-42).

This work was widely acclaimed in the Anglo-American cataloguing world, and as a result it was generally accepted that a new code was required. In 1960 Lubetzky published another work, his Code of Cataloging Rules, Author and Title Entry: an Unfinished Draft, which firmly established that cataloguing rules should be based on principles and not on specific cases.

Between October 9 - 18, 1961, an International Conference on Cataloguing Principles was held in Paris, which was attended by delegations from 53 countries and 12 international organizations. This conference had a deceptively simple objective: it had to achieve international agreement on rules for author and title entry in alphabetical catalogues so that cataloguing might be done in countries where the books are originally published in such a way that these cataloguing entries could be used by libraries all over the world (Maxwell, 1977: 252). From this conference emerged the twelve point Statement of Principles which were to a large extent influenced by Lubetzky's draft proposals. These so-called "Paris Principles" consisted of a set of rules for the choice and form of headings and entry works in large catalogues (International Conference..., 1961: 91). They firmly established the main entry principle and the principle of authorship as cornerstones of modern cataloguing. Corporate authorship was not specifically mentioned, but entry under

corporate body was called for "when the work is by its nature necessarily the expression of the collective thought or activity of the corporate body..." (op. cit.: 93 - 94). The Principles did not address the question of bibliographic description at all. In the pre-computer age the prime concern of cataloguers and indexers had been with the arrangement and organization of catalogue entries, and at this conference the whole cataloguing world had assembled and decided upon a mutually acceptable set of principles for the general standardization of access points in a catalogue: the final culmination of this preoccupation. These principles of access will be discussed more fully in 3.2.2.

According to Maxwell (1977: 251) this Paris conference represented the "triumph of Lubetzky's principles." The saber-tooth tiger seemed to be slain and the proposed new cataloguing code was to make manifest a truly new era in library cataloguing.

2.4 Compromises

The Paris Principles were then to form the basis of the new Anglo-American code which would be founded according to Lubetzky's suggestions on conditions of authorship and not on types of publication as the 1941 and 1949 codes had been.

Unfortunately it did not turn out to be quite as simple as had been envisaged. The Library of Congress found that it would be too expensive to implement all the proposed changes and Lubetzky resigned

as editor of the code-in-the-making. The Anglo-American Cataloguing Rules (AACR1) were published in 1967, but were marred by compromises and deviations from the Paris Principles. The most notorious example was the retention of the practice (appearing as rules 98 and 99 in the American version) of entering certain corporate bodies under the names of places - a drastic departure from the Paris Principles of entering corporate bodies directly under their names. On this point and certain other points the American and the British committees could not reach complete agreement. This disagreement entailed the publication of two separate texts of the Anglo-American Cataloging Rules, the North American text and the British text, a fact that has since been denounced by many cataloguers (Chan, 1981: 18). Since the Paris Principles were confined to "the choice and form of headings and entry words" (International Conference ..., 1961: 91), and it had been decided that the AACR1 would deal with rules for both headings and bibliographic description, rules for the latter were required as well. A revised version of the Rules for Descriptive Cataloging in the Library of Congress of 1949 was therefore incorporated into the AACR1.

2.5 The Birth of International Standard Bibliographic Description (ISBD)

The focus of interest for the cataloguing world now moved away from headings and entry words which, it was felt, had been conclusively dealt with by the Paris Principles. At the International Meeting of Cataloguing Experts (IMCE) in Copenhagen in 1969 it was agreed that

it was desirable to formulate a standard system according to which national agencies could describe their publications in an internationally acceptable format which would greatly facilitate the exchange of information. For this purpose it was necessary to aim at creating an internationally acceptable framework for bibliographic description that would fulfil the requirements of catalogues and bibliographies alike (International Conference ..., 1961: 111). London (1980: 273) regarded this meeting as a turning point in modern cataloguing: attention now moved from the overriding concern with uniform rules for "the entry words that govern the place of the record in the alphabetical catalogue", which resulted in the Paris Principles, to the "creation of a standard pattern for bibliographic description."

This Meeting in turn provided the impetus for The International Federation of Library Associations (IFLA) to develop a formula for an internationally acceptable standard for bibliographic description. In 1971 a draft of the International Standard Bibliographic Description for monographs, known as ISBD(M), was published, which became the basis for the revised chapter six of AACR1 (1967), published in 1974. Working groups were also set up to provide ISBD's for other library materials ISBD(NBM), and for cartographic materials ISBD(CM). These various ISBD's were, however, causing problems as they were deviating from each other and from the original basis (London, 1980: 275). Thus a comprehensive "general framework, to be known as ISBD(G)" (AACR2: viii) was published in 1977, upon which Part 1 of the AACR2 was then based. The function of ISBD was to provide a uniform descriptive

framework for all types of library materials. ISBD would also further the communication of bibliographic data by

- (i) enabling bibliographic records from different sources to be interchangeable
- (ii) making the conversion of bibliographic data into computer readable form easier
- (iii) facilitating identification of the bibliographic data within the record regardless of the language of the record (Kerr & Clarke, 1977; 210).

The principle of bibliographic description will be discussed in 3.2.1.

2.6 The Anglo-American Cataloguing Rules. 2nd ed, 1978 (AACR2).

In the course of the 1970's it became obvious that an extensive revision of AACR1 was required. The major difficulties with the AACR1 had been caused by deviations from the Paris Principles, and attempts were made to remedy these by introducing revisions on a piecemeal basis. Paris Principle 10.3 had ruled that "the main entry for a collection ... should be made under the title of the collection if it had a collective title"; AACR1 in Rules 3 - 5 called for entry under compiler. These rules were revised in 1975 (Cataloging Service Bulletin 112).

The notorious Rules 98 and 99 in the American edition (see 2.4), which were a contradiction of Paris Principle 9.4, were also cancelled in this period. In addition, the Library of Congress had become

interested in 'desuperimposition': in ending their policy of using headings that had been established under pre-AACR1 rules (Kelm, 1978: 23). Some of these headings had been desuperimposed in 1973 (Cataloging Service Bulletin 106). It is thus clear that it became imperative that all these individual revisions had to be integrated into a unified whole.

The eleven years between the publication of the two editions of the AACR brought about crucial changes in the way in which catalogues were viewed by the entire library world. At the time of the publication of AACR1 in 1967, the card catalogue was firmly entrenched as the best and most reliable form of maintaining a library catalogue. By 1978 the whole emphasis had changed and the impact of computer technology had to a considerable extent confused this clear-cut view. It became obvious that the new technology would involve and affect the traditional catalogue forms, but the extent of this involvement was not always quite clear.

When the project to revise the AACR1 was started, the Joint Steering Committee for Revision of the AACR (JSC) publically declared the guidelines according to which it would determine policy questions and new proposals. These were set out by the JSC as follows:

- (i) "to incorporate already agreed revisions to AACR1;
- (ii) to harmonize the British and North American texts of AACR;
- (iii) to incorporate international standards and agreements;
- (iv) to take developments in library automation into account; and
- (v) to incorporate changes arising from proposals for

change coming from any source." (Gorman 1978: 209).

As far as the first two aims were concerned, the intention, largely of an editorial nature, was to 'clean up' and clarify the unsatisfactory aspects of AACR1, but at the same time the editors were eager to produce a code that "should be judged not just on its own merits but also as part of the 'great tradition' in Anglo-American cataloguing which stretches back to Panizzi, Jewett and Cutter" (Gorman, 1980a: 41).

The third aim specifically referred to the new developments that had taken place in the field of bibliographic description, and as far as the fifth aim was concerned, Gorman, one of the editors of the AACR2, confidently stated that all the changes incorporated into AACR2 had been approved by not only the official committees but also the individuals and the libraries that had originally proposed the changes (Gorman, 1978: 211).

As far as the fourth aim was concerned, however, Gorman stated that it "cannot, in all frankness, be said to have been fully achieved". (op. cit. : 210). And the reason for this seemed to be partly because the implications of computerisation and cataloguing had not been fully explored. Gorman himself stated that there were a number of questions posed by automation that remain unanswered by AACR2. The reason for this he ascribed to the fact that "all returns are not yet in on bibliographic records in machine systems" (ibid.). Computerised bibliographic records were essentially nothing other than manual catalogue records produced by computers and no clearly new form of

catalogue record had yet been established (ibid.). The AACR2 may therefore not be regarded as entirely satisfactory as far as instructions for the production of computerised bibliographic records is concerned.

The AACR2 did not meet with unmitigated approval. Seymour Lubetzky accused it of trying to compromise the differing opinions and objectives of the various interested parties. Such a compromise, he found, did not rhyme with the requirements of a sound catalogue based on a coherent theoretical foundation (Lubetzky, 1980: 24). Especially the rules on the entry of corporate bodies and the continued commitment to the main entry principle, were found unacceptable by many. But gradually and often grudgingly in the interests of international standardization, did first the national libraries (e.g. the British Library in 1981) and then the rest of the Anglo-American cataloguing world decide to implement the AACR2 in spite of all the problems. A more detailed discussion of AACR2 will be found in 4.3.

The future seems uncertain. The demand for code revision continues, but the computer revolution has by now affected the cataloguing world so deeply that the entire approach to our traditional catalogues and codes seem open to question. "We shall not reach a greater degree of certainty (than we have now) over the general validity of our rules until we look more carefully at the sources producing the types of data which we use as a basis for code making... We have come to the end of one methodology and must search for another." (Richmond, 1979:

188, 196).

2.7 The Influence of Technology

This survey of the history of cataloguing has concentrated on the perceived functions and objectives of library catalogues, and how they have affected the codification of cataloguing practice. Cataloguing had, however, from the beginning also been intimately involved with the technology employed in the production of the catalogues themselves, and this relationship between catalogues and technology will now be discussed.

The earliest technological development that affected library catalogues may be regarded as the invention of printing in the fifteenth century. While books were painstakingly reproduced by hand, they were relatively scarce, and sizeable collections of books were mostly to be found in church-related institutions and the homes of the very wealthy. Even these collections were small by contemporary standards, and the inventory-catalogue provided adequate access to a collection.

The next important technological development affecting library cataloguing was the one that did not succeed when Jewett wanted to reproduce a large union catalogue by using the then new printing process of stereotyping; the technological problems of which defeated him. Jewett had however predicted the creation of a universal bibliography consisting of a system not unlike that which is now

called Universal Bibliographic Control (UBC) (London, 1980: 261). Thus his ideas were developed when the technology was no longer an obstacle.

The nineteenth century did however see another very important technological development, which Malinconico (1977: 312) described as perhaps the single most important technological innovation for libraries in the nineteenth century. This was the invention of setting type from hot metal, which in 1898 was adopted by the Library of Congress for the printing of its catalogue cards. Three years later copies of these Library of Congress printed cards were made available to other libraries in the United States, and Malinconico regarded this single application of technology as perhaps the seminal event in the modern era of standardization in bibliographic control (ibid.).

As a result of the availability of these catalogue cards, it was clearly in the interests of libraries in the USA to have their own cataloguing formats and standards coincide with those that were now so easily available. Even British libraries followed suit, with the result that the first co-operative catalogue code appeared in 1908 (although in separate American and British texts).

The most far-reaching technological change as far as cataloguing is concerned has however been brought about by the computer, and these changes have been very much more remarkable and pervasive than any of the earlier ones.

Malinconico explained (1977: 315) how printing from movable type merely amplified and replaced the hand of the scribe, or of the librarian making entries in a manuscript catalogue. A computer, however, he saw as the externalization of one's very thought process and as such will be able to exercise a much more pronounced influence on that to which it is applied.

The library catalogue itself has changed remarkably in recent years. The old card catalogue has nearly disappeared, and in its place one now finds (in its latest form) the on-line interactive catalogue which may be described as the most modern and flexible form of catalogue. Such an on-line system permits instantaneous, sophisticated access to information and direct interaction with a computer. At the same time, it also permits a unique degree of integration of library facilities (Malinconico & Fasana, 1979: 66). An on-line catalogue may thus be defined as a catalogue which may be accessed through direct interaction between computer and user. Such a catalogue, according to Kilgour (1979: 39) possesses far greater usability than does a card catalogue. The on-line catalogue provides more extensive physical access, many more access points to information in the catalogue, and is faster and more accurate to use than a card catalogue (ibid.: 39).

The extent to which this enormously powerful tool has influenced the production of catalogues and the principles upon which they are based, will be discussed in 3.2.3.

2.8 Conclusion

In the light of this brief review of the history and development of the library catalogue, it now becomes possible to isolate and study the principles underlying the cataloguing process in an attempt to establish whether an encompassing "theory of cataloguing" had indeed been proposed and implemented in this period. This will be done in the next chapter.

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3. THE THEORETICAL FOUNDATIONS

3.1 Introduction

In the previous chapter the researcher attempted to set out in broad outline the historical development of the library catalogue as it is known today. It has now become necessary to look more critically at the functions required of catalogues, and the reasons and justifications that were given for the catalogue codes that were drawn up in this period. A certain amount of repetition will be inevitable, but the researcher has at all times attempted here to provide the reader with insight into the reasoning behind the work of the different cataloguing authorities, the catalogues which they proposed or attempted to create, and the principles which they believed were basic to the catalogue.

3.2 The Principles of Cataloguing

Writers on cataloguing since the days of Cutter and Jewett have looked at the library catalogue and attempted to frame the principles according to which it operated in terms of what they perceived as its most important functions.

As early as 1850 Anthony Panizzi, in his insistence on a consistent and coherent set of rules for the British Museum catalogues, expounded "one leading principle, that of fulness and accuracy". (Van Houten: 363).

Cutter clearly formulated "the two sometimes dichotomous purposes of the library catalog" (Maxwell, 1977: 239): that it should serve both as a finding list and to display together in a single sequence such "literary units" as the works of an author, and all editions, translations, etc. of individual works (ibid.). From this he deduced that the principle of authorship was best suited to fulfil these functions.

Jewett had other purposes in mind. He wanted to construct a large union catalogue which would be reproduced according to the requirements of the various participating libraries by using separately stereotyped titles and descriptions which could be arranged in different ways, and into which new titles could easily be inserted. For this to succeed he also proposed and compiled a set of rules so that the participating libraries could all produce similar cataloguing copy. As Jewett regarded his catalogue from a very different point of view to that of Panizzi & Cutter; it follows that his methods would be different too. From 2.1 it became clear that Jewett may be regarded as the originator of the principle of the title-unit-entry. One has to note at the same time, however that he was an unconscious originator of this principle which he introduced for purely pragmatic reasons. Tate commented that "by a curious paradox, though Jewett was a staunch advocate of author entry, the working file he designed for his innovative scheme was essentially a title-unit-entry file" (Tate, 1980: 111).

Essentially then, the original principles of cataloguing were defined generally in terms of comprehensiveness and accuracy: the first requirements of a reliable catalogue. More specifically and always subject to these, the principles of cataloguing were then seen in terms of bibliographic description and of authorship, which may be broadened to the principle of access, as access in a catalogue is not achieved through authorship alone. The researcher will try to show that all the principles relating to cataloguing that have been expounded since Panizzi, Jewett and Cutter may be seen as elaboration or refinement of the principles either stated or implied by them.

The discussion will therefore now centre on the principle of bibliographic description, and that of access, both of which exist within the frame of Panizzi's primary and enveloping principle of "fulness and accuracy."

3.2.1 The Principle of Bibliographic Description

The importance of the principle of a clear, uniform, concise and uniquely identifying description of a bibliographic item was first realised by Jewett who, as previously noted, (see 2.1), also separated the act of describing the item from that of providing the headings required. His rules clearly stated that one should only decide on the form of the heading after the description had been completed (see 2.1). Cutter, however, reversed this order of the cataloguing process and one may well agree with London (1980: 264) who could not help asking why, after Jewett had given cataloguing rules a logical

structure: description first, access points via headings and cross-references afterwards, was this natural and sensible sequence abandoned in the earlier Anglo-American cataloguing codes? The reason was supplied by Gorman who explained that the order of the major parts of previous cataloguing rules (the Anglo-American code of 1908 as well as AACR1) reflected the pre-computerised approach to the cataloguing process; in other words the cataloguer first had to establish the main entry heading together with the relevant added entries and only after that prepare the bibliographic description (Gorman, 1978: 211 - 212).

In the pre-computer era the cataloguing emphasis was clearly on rules for entry and heading; and that most important and authoritative meeting ever held by cataloguing specialists, in Paris in 1961 (see 2.3), limited its published Statement to "the choice and form of headings and entry words." (International Conference ..., 1961: 91). Bibliographic description was taken care of by large numbers of specific rules attempting to cover all the peculiarities of publication without an underlying logical framework. Certain very definite assumptions were inherent in these individual rules, as Curwen (1980: 63) has stated very clearly.

In the first place, he said, it was assumed that libraries mainly contained books of the Western cultural tradition. Secondly, these books were usually written by named authors. Thirdly, the books were given identifying titles by their authors. Fourthly, the books had titles pages with most of the information required for cataloguing "so that the title page became sacrosanct." And fifthly, other materials

could either be forced to fit in with this approach or would be catalogued separately.

The fifth assumption caused the most difficulty. 'Non-book materials' were the 'second class citizens' in a library, relegated to separate small catalogues with highly idiosyncratic descriptions, or not catalogued at all so that "public access to media in libraries was practically a staff secret." (Intner, 1983: 102). Berman (1979: 68) stated even more emphatically that books were treated best while audiovisual media were undercatalogued "and physically segregated from the print mainstream."

As noted in 2.5, the attention of the cataloguing world shifted away from the formulation of entry words and headings after the Paris conference, as the most important need was now felt to be greater international uniformity and standardization in descriptive cataloguing. This new interest in bibliographic description culminated in first the ISBD(M) in 1971, then in separate ISBD's for various kinds of non-book-material, and eventually the ISBD(G) in 1977.

The ISBD is based on the principle of creating a formula for a standard, internationally applicable, bibliographic description; which allows all library materials to be described according to this formula. The principle of description adopted by the AACR2 is grounded in this ISBD framework. It consists of all the elements required for the bibliographic description of all kinds of library

materials; it arranges them in a standardized order and prescribes specific punctuation marks to delimit each element (Gorman, 1980b: 54).

The structure of the AACR2 resembles the approach that Jewett had introduced more than a hundred years earlier: descriptions have to be completed before headings are assigned. Part 1 consists of a general chapter that deals with problems common to the description of all library materials, followed by ten chapters dealing with the description of specific types of library materials, and finally by two chapters on pervasive problems of description; Serials and Analysis. This integrated approach ensures that all library materials receive equal and consistent treatment in AACR2 so that the rules in Part 1 have an internal harmony brought about by the application of the same principles to descriptions of different kinds of library materials, (Gorman, 1978: 212 - 213) and thus achieving "a general application of truly general principles to all materials" (Gorman, 1980a: 43).

The AACR2 has since its inception proved a vital force in the international standardization of bibliographic descriptions which, based as it is on ISBD, produces comprehensible and interchangeable records for use in catalogues and bibliographies throughout the world.

3.2.2 The Principles of Access

As soon as any collection of items grows too large for each item to be remembered individually, a catalogue becomes necessary to exercise

adequate control over the collection. Such a catalogue should list all the items in the collection, describe them in such a way that each item is uniquely identified, and arrange them so that any potential seeker for an individual item may be able to find that particular one easily, in other words have access to the item.

Catalogue entries therefore became substitutes for the items themselves; and by virtue of the fact that a number of entries could be made for a single item, thereby providing a number of access points for that item, the number of entries become simultaneous substitutes for the same item. In this way a user is able to locate a certain item using various approaches, and all items that belong together from a particular point of view may be collocated in one sequence.

These functions of a library catalogue were incisively described by Lubetzky (1979b: 159) who made it clear that Cutter's catalogue, and before that, Panizzi's, did not consist simply of a finding list for books with specific titles by authors with specific names. It was also designed to serve far more broadly as a guide to the resources of the collection. Cutter's basic premise was that a reader looking for a particular book needed the work contained within it - the reader might not realise that the required book is one edition of a work which could also be found in the library in other guises, such as translations, or published under different names of the author or with different titles. The catalogue should in other words be constructed to inform the user not only whether or not the library has a particular book, but also to show relationships between all the

materials in the library which might serve the requirements of the reader.

3.2.2.1 The Collation Function

This display of the related materials in the library, also known as the 'collocative' or collation function, is the problematic aspect of the principle of access in the catalogue that conflicts as Lubetzky pointed out, with the basic 'finding list' or 'direct' function of the catalogue. Simonton explained that the conflict arose from the fact that entries or headings that were constructed in such a way that the user may easily find the record for a particular book, might not be those entries or headings most suitable for collocating or assembling all the intellectual creations or works of a single author, or all of the manifestations of a particular work, because those rules that were formulated to fulfil the finding list function concentrate on the physical object, particularly the title page, and rules formulated to fulfil the collocation function concentrate on the intellectual content of the document, without considering the details of a particular title page. Difficulties thus might arise because of differing identifications of an author and differing identifications of a work (Simonton, 1980: 24 - 25).

In cases where such conflict arises, and a choice has to be made between these two objectives, the choice may be seen as a choice between favouring the 'bibliographic unit' (the physical object) or the 'literary unit' (the intellectual content). The question is

whether the bibliographic entry is to be made for the "work" which may appear in any number of different physical manifestations (different editions, versions, translations etc.) or whether it is to be made simply for the actual physical object one has in hand.

The various cataloguing codes have not been unanimous on which of these two units, literary or bibliographical, should be favoured in organizing the access function of the catalogue. The Anglo-American code of 1908 and the ALA Catalog Rules of 1941 had no explicit statement of principles, and did not indicate whether the literary or bibliographic unit was preferred. The 1949 Rules for Author and Title Entries carried an explicit statement of principle on this point:

"the finding list function of the catalog is extended beyond what is required for location of a single book to the location of literary units about which the seeker has less precise information. Added entries provide alternative means of approach... (and) serve also to complete the assembling of related material as part of a literary unit." (ALA Cataloging Rules: xx).

Lubetzky (1979b: 161) was one of the most eloquent advocates for emphasizing the literary unit. He unequivocally stated that a catalogue which merely represented a book as a separate entry would "revert in character to the primitive catalog representing essentially a list of names and titles among which a book bearing a certain name and title might be found and nothing more." (ibid.).

Verona on the other hand argued the case for the bibliographic unit in spite of recognising the fact that neither method could be

regarded as the perfect solution (Verona, 1961: 150). She made it clear that the descriptive part of the main entry had to be based on elements characterising the particular publication as an individual, physical entity. Thus it would seem that if one were to base the choice of elements according to which the main entries have to be arranged in the catalogue entirely on the title of the abstract literary unit, this would be in logical contradiction with the descriptive aspect of the main entry. Even from a logical point of view, the representation of particular publications through main entries, would thus seem to be preferable (Verona, 1961: 152 - 153).

Verona's closely argued but pragmatic approach might have been the basis for the attitude adopted by the codes that have followed. The AACR1 did not state its position on this point, but Simonton (1980: 25) felt that its expressed preference for title page information seemed to reveal an implicit emphasis on the bibliographic unit. As far as the AACR2 was concerned, one did not encounter an explicit statement of preference either, but one might nevertheless discern an inclination towards the bibliographic unit. Simonton (op. cit.: 26) noted that the AACR2 circumscribed more sharply than AACR1 the use of sources outside the item itself for additional bibliographic information for the identification of a literary unit. In addition, uniform titles, the accepted device for assembling literary units, are presented as an option only; and the provision that is made for using multiple pseudonyms of a single author (if no single one predominates) instead of selecting one of the pseudonyms or the real

name as a uniform heading for the author, would also suggest that the AACR2 prefers the bibliographical rather than the literary unit.

Gorman has countered this kind of argument by stating that the AACR2 favours neither the physical object or the work (1978: 212), but by dealing first with the bibliographic description of the physical object and then assigning the access points which enable the work to be retrieved, the AACR2 achieves a more integrated approach to the treatment of all library materials than had been the case with earlier codes. This is a seductive argument, but the researcher nevertheless is of the opinion that the optional use of the uniform title, and the entire approach to pseudonyms in the AACR2 (see 4.6.2) indicate an implicit pragmatic emphasis on the bibliographic unit, or the finding list function of the catalogue.

The collation function in a catalogue is directly affected by the main entry principle, as the main entry is the element around which the collocation of related items takes place. The next principle of access to be investigated is therefore the main entry.

3.2.2.2 The Main Entry Principle

In the early days of the card catalogue when individual entries were laboriously typed or written by hand, the main entry with additional added entries, provided access for each item in a given collection.

The main and added entries together collocated works that were related to one another from various points of view. The access point chosen

as main entry - in a work of single personal authorship the name of the author - gave the fullest information about the work, while the added entries, for practical reasons, could give this information in considerably abbreviated form. The main entry was the most important, the indispensable entry, and was to be given in full, whereas the others were auxiliary entries and could be abbreviated or entirely omitted (Lubetzky, 1953: 58). Originally then, the concept of main entry signified nothing more than the one place in the catalogue where the most complete information about a given work could be found.

With the improvement of the technology for reproducing catalogue cards, the concept of the unit card arose. The main entry could now be reproduced mechanically any required number of times. The appropriate heading for an added entry could then simply be typed in above the main entry heading and filed in the catalogue in the place appropriate to the new heading.

This apparently simple, technological development changed an expedient solution to a problem of reproducing catalogue cards into a principle of cataloguing. The main entry now ceased to be simply the fullest access point; it came to be regarded as the best access point. Because of the traditional belief that the name of the personal author of a work was the most sought access point (see 2.1) the main entry became synonymous with the concept of access by the name of the author.

Cutter (1904), Lubetzky (1953), the Paris Principles (1961) and AACR1

(1967) all stated that a work should be entered under the name of the author. In this way the main entry became entrenched as a principle of cataloguing. This principle is, however so frequently confused with the concept of access by principal author that discussions of the main entry principle easily became clouded by the issue of whether to enter a work under author or title.

This dilemma has been solved by Malinconico who has conclusively defined the main entry as follows:

"Quite simply, it is the name we assign to a work. This name, like any other, contains two elements: the first indicates the genesis of the thing named, that is, the agent responsible for its intellectual content, and the second identifies a particular issue of the agent that is responsible for the entity named, which serves to distinguish it from all others" (Malinconico, 1980: 38).

This definition brings one to the core of the confusion between the principle of the main entry as such and the question of entry under the name of the author which will be debated separately in the next section. The main entry as the name of an intellectual creation, and which is identified by the creator, is independent of any physical version or manifestation that the work may take. Different manifestations or versions of the work are then not scattered in the catalogue, but linked together by means of the most potent unifying force - the common creator.

3.2.2.3 Main Entry versus Title-Unit-Entry

Early on in the history of modern cataloguing, there arose the idea

that the main entry was not the best principle for the proper arrangement of a catalogue (see 2.1). The alternative solution was that a bibliographic description or unit card should begin not with the name of the author of a work, but with the title, and that the title should become the organizing principle in the catalogue.

The question of author versus title entry became urgent in the 1970's with the growing importance of standardization and the increasing retrieval facilities of the new generations of computers that could handle large numbers of access points with equal ease. The new argument was that main entries originated not from some theoretically sound principle of authorship as the chief form of identification for a work, but from a pragmatic solution by a pre-computerised age to the technical problems of catalogues and cataloguing.

The main arguments in favour of the title-unit-entry were discussed by writers such as Hamdy (1974), Tate (1980) and Gorman (1978, 1979). The most trenchant of these in view of developments in modern technology must be seen to be that of Gorman who made it clear that a modern computerised cataloguing system enabled one to construct a network of links between various entries in the catalogue so that "the main entry ceases to exist as such". (1978: 218).

The adoption of a principle of title-unit-entry will bring about a considerable simplification of the cataloguing process. It is significantly quicker and simpler to enter a work under title consistently, and then to make a number of equal access points, rather

than to decide on one main entry; itself "an inexact and time-consuming process" (Tate, 1980: 116). Such a change would bring about a reduction in cataloguing costs and make materials available to users faster. In addition, the simpler decision involved in making a title-unit-entry could facilitate the standardization of catalogue records and assist international co-operation.

A survey of pertinent studies conducted by Tate suggested that users usually approached a catalogue in search of a known item, and that if the title rather than the name of an author was used as the access point, the title information was more likely to be correct (1980: 118 - 123). One may therefore suggest that users may prefer catalogues constructed according to the title-unit-entry principle, but such an argument would presuppose a single entry catalogue, which is in any case not very common. It would therefore be very difficult to base a decision of an author-entry-catalogue versus a title-entry-catalogue on user needs and preferences alone.

The AACR2 did not solve the conflict between main entry and title-unit-entry, but preserved a commitment to the main entry principle while attempting to appease the adherents of the title-unit-entry as well. The position of the AACR2 is set out in the General Introduction where it is stated that "one main entry is made for each item described, and that this is supplemented by added entries." Apparently an option had existed in early drafts of the AACR2 to create a title-unit-entry according to the rules of description as set out in Part 1 and to add to this a number of access

points without distinguishing one as the main entry. Maxwell (1980: 6), however, explained that this option was dropped in the final version of AACR2, primarily because the Paris Principles were firmly grounded in the principle of main entry and authorship responsibility, and the AACR2 Joint Steering Committee had been charged to adhere to the Paris Principles. Traces of this early option remain in the AACR2: "The question of the use of alternative heading entries (i.e., sets of equal entries for each item described) was discussed but has not been embodied in the rules, largely because of the lack of time to explore the considerable implications of such a change." (AACR2, 1978: 2)

NB Although the AACR2 acknowledges that some libraries already use alternative headings, and recommends that they use chapter 21 only for determining the form of access points required in their catalogues, it also recognises that under certain circumstances one heading will have to be more "equal" than the others: a main entry is still a useful concept if a work has to be cited or listed once only, and is also important "in assigning uniform titles and in promoting the standardization of a bibliographic citation." (AACR2, 1978: 2). NB

Lubetzky bitterly rejected the approach of the AACR2. He saw the argument of the main entry versus the title-unit-entry in terms of the old question of the function of the catalogue being merely that of a finding list, or whether it was to be a guide to the resources of the collection as well. Traditionally, he said, the main entry had been designed to represent a book as an edition of a particular work

(Lubetzky, 1980: 18), or the manifestation of an intellectual creation, no matter what its present form may take. The adherents of the title-unit-entry seemed to abandon this view and to regard publications rather as individual bibliographic entities (op. cit.: 19). Lubetzky thus felt that the AACR2 exhibited a "split ideology" on the basic question of whether a catalogued book should be viewed and represented in the catalogue as an individual entity or as an edition of a particular work by a particular author (ibid.).

The question of title-unit-entry versus author main entry may thus be summarized in the question whether a book should be seen as the intellectual creation of a particular creator which may assume several manifestations, or whether it is nothing but a very particular bibliographic unit. If one returns to Malinconico's definition of the main entry in 3.2.2.2, it becomes possible, however, to solve the dilemma. It is easy to agree that the concept of the main entry as a unit-card which is reproduced a certain number of times and to which is added a number of added entries and filed in different places in the catalogue is obsolete within the modern computerised context. A title-unit-entry catalogue may, however, and for the following reasons, not provide the best solution once this obsolete approach to the main entry catalogue is rejected:

Title-unit-entries together with relevant access points will provide all the necessary information regarding a particular work, but this may not be enough. If one needs to identify a work fully and uniquely in a single entry, a main entry consisting of the name of that

work is still a prerequisite. In large catalogues, titles are often too similar, even generic, to function adequately as primary access points. Titles are simply not unique enough, whereas all creators may be differentiated by virtue of their human individuality.

This is important even in computerised catalogues for which it has been claimed that the main entry is obsolete. Malinconico (1980: 39) replied to the suggestion that the concept of a single name for a work could be replaced by a network of links among its various manifestations, by saying that in order to control such a network "a focus, or center", must nevertheless be made for it. And if this is done, the concept of main entry has only been "reinvented under a different guise"; if not, one will have "a difficult time making decisions to incorporate additional manifestations of the unnamed entity into the network of relationships that defines it". The problem, as he succinctly states, "is ontological, not mechanical, hence its solution is not likely to vary with technology" (ibid.).

In the AACR2's attempt to appease both parties in the conflict, it has not finally satisfied either. The researcher, however, believes that the solution seems to lie with Malinconico's "reinvention" of the main entry principle under a different guise. Lubetzky was under the impression that only the main entry principle could adequately fulfil the collocation function in the library. This whole argument was thrashed out between Lubetzky and Gorman in the discussion which followed Lubetzky's 1979a paper, the tone of which is best preserved by reproducing their words in full. Lubetzky argued that:

"There is great importance in having a work in one place under one author: there may be a good continuation; there may be works in progress; there may be all kinds of adaptations, for the stage and movies; and there may perhaps be translations. If, therefore, you are not going to have a choice of author and identification of the work at the beginning, there will be no way to refer or relate all of the adaptations to the work, because the various manifestations of the work will be strewn in various places. To have title entry and thus be forced to provide the linkages in all these stages would not only enormously complicate a catalog. For the cataloger it would mean that every time a new work which related to this work appeared, it would have to be related not only to one place, but every other place this work appears. The number of references would become overwhelming. If there was a main entry for the original work, this would not be necessary of course, because all of the different versions would be organized under the main entry and efficiently related to each other". (The Nature & Future of the Catalog: 164)

To which Gorman replied that he agreed with Lubetzky regarding the function of the catalogue, but that a developed computer system was indeed able to fulfil the functions required by Lubetzky without being overwhelmed:

"... the links are capable of expressing all the relationships that Professor Lubetzky is asking for. In other words, you could link a name to a work, and say that this was the primary name, or a joint authorship, or any other kind of relationship that you wanted to." (The Nature & Future of the Catalog: 165).

In other words the basic main entry principle of arranging a network of catalogue entries around the name of a work does not have to disappear in a well-organized computer-based catalogue. Gorman explained that one will now have to replace the main entry with the concept of a standard citation. 'Enter under' will then come to mean that the standard form for the citing of this work is the following..., or the standard form of name for this person is the

following... (The Nature & Future of the Catalog: 145).

So it would seem that even if the main entry as such is doomed to disappear, the principle will remain, though it might become known as the "principle of standard citation". A computerised catalogue may well be arranged around the bibliographical descriptions of single manifestations of a work to which has to be attached a number of access points. In each case one of these access points will, however, have to be designated as the standard form of citing that work. That citation will then become the centre for the network of links between the work and the rest of the catalogue, and will collocate the work with other manifestations of the work that appear in the catalogue under different titles, in other languages, or varying manifestations.

One may therefore state that the principle of arranging a library catalogue around uniquely identifying names of the works in the collection - usually known as the main entry principle - should remain a functional necessity in library catalogues whether or not they are computerised.

3.2.2.4 The Principle of Authorship /8

As stated in 3.2.2.2, the idea that the name of the author is the simplest and best element around which to arrange the catalogue, had been accepted in the cataloguing world for a long time. Panizzi, Jewett and Cutter had all produced catalogues based on a concept of authorship (see 2.1 - 2.2).

Cutter had comprehensively defined the concept of "author":

"Author, in the narrower sense, is the person who writes a book; in a wider sense it may be applied to him who is the cause of the book's existence by putting together the writings of several authors (usually called the editor, more properly called the collector). Bodies of men (societies, cities, legislative bodies, countries) are to be considered the authors of their memoirs, transactions, journals, debates, reports, etc." (Cutter, 1904: 14).

The principle of authorship was stated even more simply and clearly in the 1949 Code: "1. General Rule: Enter a work under the name of its author whether personal or corporate." This conviction that the principle of authorship included the concept of corporate authorship became one of the distinguishing features of Anglo-American cataloguing practice, even though it was recognised that this was a difficult concept to apply consistently.

Lubetzky, in his Cataloging Rules & Principles: An Unfinished Draft recognised the difficulties inherent in the "theory of corporate authorship", but insisted that corporate authorship was a workable concept in spite of the obvious problems in implementing this principle in cataloging rules (Carpenter, 1981: 29). By 1961 he had defined the conditions of corporate authorship in the following terms:

"Intrinsically, a work representing an act, communication, or product of the activity of a corporate body, or one bearing the authority of a corporate body, is to be regarded as a work of corporate authorship. Extrinsically, the relation of a corporate body to a work issued by it may be determined from the title or title page of the work. If the title implies authority or responsibility of a corporate body, that body is to be

regarded as the author of the work, even if another body, a division of the body, or an individual is named as having prepared it." (Quoted by Carpenter: 62)

The delegates at the Paris Conference in 1961 were considerably influenced by Lubetzky's work and thought, and reached an agreement on the use of corporate bodies as main entries, although the term "corporate authorship" was not used. NB

The principle of corporate authorship was nevertheless firmly established in the AACR1 which interpreted the entire concept so broadly that it tended to avoid entry under title proper as far as possible (Vérona, 1975: 9). According to the AACR1, corporate headings were to be made for names most strongly associated with particular works even though such names did not necessarily represent authorship, but contained elements of subject entry or even pure form headings (ibid.).

Almost inevitably then, the question of corporate authorship came to be seen as one of the important problem areas in AACR1. The concept of corporate authorship was interpreted too widely, and produced headings that were unacceptable in terms of the principle of authorship. The rules themselves were at times inconsistent and required, for example, corporate entry for certain serials when such entry could not be justified according to principles of either author or title entry (AACR1: 6B1). The American version of the AACR1 approved certain exceptions to the principle of entry under a corporate body (AACR1: 98 - 99), so that the standardization of British and American catalogue records still was problematic. And

apart from these difficulties regarding corporate entry imposed by the AACR1, "the concept of corporate authorship remain(ed) elusive and its practical applications pose(d) continual problems" (Gorman, 1978: 219). To exacerbate matters, the concept of corporate authorship itself was never conclusively defined or rationalised.

An exhaustive account of the development of thought from the point of view of corporate authorship in the period of revision of the AACR is to be found in Carpenter's work Corporate Authorship, and he clearly charted the gradual process of its abandonment. In 1975 Verona had published her work Corporate Headings and this considerably influenced the Joint Steering Committee for the Revision of AACR (JSC) in this process. She did not attempt to justify the principle of corporate authorship itself, but recognised that the principle of corporate entry was accepted by a great majority of the national delegations (Verona, 1975: 1) at the Paris Conference of 1961, and therefore her work was limited to a critical analysis of the problems, difficulties and solutions related to corporate headings used in library catalogues in the international library world.

Although she did not reject the principle of corporate authorship itself, the position that the AACR2 would eventually reach is clearly present in the following suggestion by Verona:

"A possible solution might be to restrict, with respect to scientific and technical works, corporate authorship to cases where there is no doubt that the works are the result of the creative activity of a corporate body as a whole, and where no conflict with personal authorship might arise. This would be the case with proceedings of

conferences and reports of the scientific results of an expedition. By contrast, monographic works dealing with scientific, technical, economic, etc. topics and approved, commissioned, issued, sponsored or published by a corporate body, and which do not fall into the two categories above, should be considered to be of personal authorship; publications containing such works would be entered under personal name, if there are not more than three authors (or principal authors), and under the title proper if there are more than three personal authors or if no personal author is named or ascertained." (Verona, 1975: 21).

When this was published, the concept of corporate authorship was being challenged by the JSC. The problem centered around the definition of corporate authorship itself. The definition in the early drafts: "Consider a work to be of corporate authorship if by its nature it is necessarily the expression of the corporate thought of a corporate body..." (Carpenter, 1981: 77) did not stand up to scrutiny by members of the JSC. Upon the publication of the AACR2, Koel, one of the members of the JSC, noted in this regard that his committee had "spent many hours trying to define corporate authorship, but had to give it up as it was not possible to identify a principle or set of principles upon which such a definition could be formulated." (Koel, 1980: 167).

It therefore became clear that if a principle of corporate authorship could not be used in order to justify entry under corporate body, it should be replaced by a carefully structured set of conditions which would govern corporate entry in the catalogue. By 1977 a member of the JSC noted, according to Carpenter, that corporate main entry was no longer based on a theoretical understanding. Instead, the new code demanded that corporate entries were to be treated according to

practical considerations. Theoretical justifications had in other words been abolished with respect to corporate entry (Carpenter, 1981: 91).

This deviation from the AACR1 and the Paris Principles did not go unchallenged. It was often felt that the AACR2 had sacrificed an important principle of cataloguing for pragmatic reasons that have nothing to do with improving the catalogue itself. Gredley (1980a: 1) expressed this by saying that the makers of the code attempted to solve the problem of corporate authorship by eliminating it.

In the AACR2 the principle of authorship is limited to the concept that the name of the author of a work is to be regarded as the point around which the author's works are displayed and identified, i.e. the principle of authorship refers to personal authorship only. Corporate authorship does not exist in the AACR2: instead the "nebulous notion of corporate authorship" was replaced by a "rigorous operational definition of corporate responsibility and by a rule that, in dealing with well-defined instances, is easier to apply." (Gorman, 1978: 219).

In his study Corporate Authorship (1981) Carpenter concluded that this might turn out to have been a short-sighted solution. Catalogues that are not based on a comprehensive theory of authorship, but which use arbitrary categories for entry (e.g. AACR2: 21.1), may eventually sacrifice both precision and intellectual justification. Whether this will indeed be the case, remains to be seen. The researcher's

conclusions in this regard will be found in 4.5.2.1 upon completion of a study of the applications of these rules on corporate headings in an actual catalogue, the SANB.

3.2.3 Cataloguing Principles and the Computer

Before concluding this survey of the principles of cataloguing, it is essential to take into consideration the most important influence to which the library catalogue has ever been exposed - the computer. In the past 15 years the traditional card catalogue has become almost obsolete and in its place we find the various computer-produced replacements, such as print-outs, microfiche and on-line catalogues. To what extent have the principles of cataloguing been affected by such changes? These principles as expounded in the present study may briefly be summarized as follows:

The principle of access embodies the primary functions of a library catalogue, i.e. to act as a finding list for predetermined items in the collection and to collocate items in the collection that may be related from various points of view. It was also indicated how the long established principle that the name of an author is the best nucleus around which to organize access in a catalogue became entrenched in a main-entry principle. The other important principle of cataloguing; that of bibliographic description, was shown to have developed from the need to provide clear, concise, unique and uniform descriptions of items in a collection; a principle that has triumphed in the AACR2 which has enabled librarians to catalogue all library

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materials in a standardized format.

The computer is a most powerful tool for the reproduction and maintenance of catalogues; and in addition provides far more extensive search facilities than had ever been possible with card catalogues. Such facilities include the ability of combining searches, employing Boolean logic, retrieving with partially correct information or truncations, and searching by unexpected access points and keywords. It has also become possible to add to standard catalogue entries much additional subject information such as from abstracting and indexing services, that have until now been regarded as unbibliographical (Gorman, 1979, 1980a, 1982a, 1982b; Malinconico, 1979a 1979b, 1980; Richmond, 1979, and others). The computer will thus enable librarians to expand the capabilities of their catalogues far beyond what used to be expected of them. At the moment, however, no principles for standardized and uniform expansion of catalogues which would fully utilize the vast potential of the computer catalogue, have been created or generally accepted.

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Such new principles would need to be concerned with the structure of rigorously controlled data bases (see 1.4) which would ensure the consistent arrangement for all records. If consistent organization is lacking in a catalogue, this cannot be fully compensated for by sophisticated access facilities. Such access to a data base lacking a coherent structure would result only in "statistical access"; a user could only know that s/he had managed to sample the body of records satisfying a query, but would never know what else might be in the

collection that would have satisfied the same query (Malinconico, 1979a: 45). It is fairly simple to provide a computerised catalogue with a finding list function, but a coherent catalogue from which one requires more than just 'statistical access' - from which one requires a collocation or an organizing function - needs a rigorous syndetic structure that will ensure a logical, consistent and standardized data base. Principles and rules for the construction of such data bases have yet to be formulated.

It has to be emphasized, however, that for computerised catalogues to be successful at all, they will have to be at least as good as traditional catalogues, and to provide all the facilities expected from an 'ideal' card catalogue. The established cataloguing principles as summarized above will in other words remain as valid as ever. They are, however, not enough, as they provide no basis for the new additional capabilities of computer catalogues. Gorman, one of the editors of the AACR2, admitted that the AACR2 had not been able to take into account the latest technological developments affecting the catalogue (see 2.6). Cataloguing principles will thus need to be expanded for the vast potential of this new tool to be exploited in full. Cataloguing will remain an intellectual task which has to be grounded on clear, logical and consistent principles, and standards will have to be maintained even more rigidly if the new catalogues are to fulfil the functions of the catalogue formulated a hundred years ago. Computers will not cause the cataloguing process to be simplified; the intellectual effort will still be required to organize and link the records in order to attain the syndetic

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structure that Cutter had envisaged. It will also be necessary to reconsider all the existing cataloguing systems, and how best to fulfil perceived functions in terms of the new technology. If this is not done, if computers are simply used to "speed up and perpetuate outdated systems", one may be forced to conclude that the computer is being misused or even wasted in libraries, that all this effort is nothing but "a perversion of technology." (Gorman, 1979: 128).

3.3 No Comprehensive Theory

The main principles of cataloguing as discussed in this chapter and summarized in 3.2.3 have been shown to be expressed in terms of access and description. Different cataloguing experts have written at length about these principles, and attempts were made to codify them in the various Anglo-American cataloguing codes that were published from 1908 to 1978.

The codes published until 1949 were heavily influenced by Cutter and his ideas on the principles of access (see 2.1 - 2.2, 3.2, 3.2.2). Unfortunately these codes were marred by their attempts to enumerate problems rather than to base their rules on the principles themselves, so that it is impossible to regard any of these early codes as coherent expressions of the principles of cataloguing.

Lubetzky was a powerful advocate of a return to cataloguing based on principles (see 2.3). His work was based primarily on principles of access. These were to a large extent formalized by the Paris

Principles of 1961, but the AACR1 which was in turn to be based on the Paris Principles, incorporated too many compromises and deviations (see 2.4, 2.6) for it to be accepted as a unified interpretation of these Principles.

Lubetzky attempted to formulate a theory of cataloguing based on a principle of authorship that included corporate authorship. This interpretation of authorship was found (see 3.2.2.4) to be difficult to implement satisfactorily, and was excluded by the AACR2 which prescribes a pragmatic approach to corporate entry while rejecting the principle of corporate authorship.

The work of Lubetzky probably came closest to a general theoretical framework for the library catalogue, but as it was to a large extent based on principles of access and did not pay much attention to the principles of bibliographic description, may not be regarded as a rational explanation of the whole cataloguing phenomenon (see 1.1).

The principles of cataloguing that have been discussed have attempted to provide a rational foundation for various problems relating to cataloguing practice. At no stage in this investigation has it been possible to single out any formulation of a single, comprehensive theory that was capable of encompassing the entire phenomenon of cataloguing.

From an examination of the literature on cataloguing it would therefore appear that the main hypothesis as stated in 1.2 of this

study could be correct, and that a "theory of cataloguing" may indeed not be found to exist. This hypothesis, and the sub-hypotheses, have however not yet been measured against the practicalities involved in an actual catalogue. In chapter 4 of this thesis the researcher therefore proposes to test this hypothesis and the relevant sub-hypotheses in terms of the practical manifestation of the principles of cataloguing. This will be done by means of a study of a catalogue, the SANB, which is compiled strictly according to the AACR2, the latest interpretation of Anglo-American cataloguing principles.

4. A CRITIQUE OF THE AACR2-BASED CATALOGUING OF THE SOUTH AFRICAN NATIONAL BIBLIOGRAPHY

4.1 Introduction

After reviewing the principles involved in cataloguing and a consideration of the extent to which those principles were codified in the AACR2, the researcher wishes to investigate an actual catalogue to see how these principles are put into practice. Such a study would enable one to understand the activities and problems involved in the construction of a catalogue. This, in turn, is required for the testing of the main hypothesis which states that the nature of the catalogue and the activities involved in its construction preclude the existence of a general, encompassing theory of cataloguing.

It is therefore proposed that a study of an actual catalogue based on the latest widely accepted interpretation of cataloguing principles and practice, the AACR2, will show how usable a catalogue may be produced according to these rules and principles. In addition the researcher wishes to test the sub-hypotheses that specifically relate to the cataloguing situation in South Africa as set out in 1.2. This will be done by attempting to establish what the most important and intractable cataloguing problems still are, and to discover whether a solution to all the problems of cataloguing as they are perceived today will in fact produce a more usable and useful catalogue - in any sense a better catalogue.

The selection of an appropriate library catalogue presented some difficulty, as the researcher wished to be able to look at a catalogue of high quality, consistently formulated according to the best cataloguing rules available today. For such a purpose catalogues that have existed for a number of years and were formulated according to successive sets of rules as they appeared in time, are clearly unsuitable.

The researcher then turned to the South African National Bibliography (SANB), which, as the prestige publication of the State Library, at this stage most clearly reflects the image of South African cataloguing. It aims to provide in standard international AACR2 format, catalogue records of most material received by the State Library in terms of the legal deposit stipulations of the Copyright Act in South Africa, with only very minor exclusions, such as: "picture strips, trade catalogues, parliamentary papers, sheet music, ephemera, pamphlets of fewer than 5 pages, house journals and school magazines." (Introduction to the SANB). The researcher therefore now wishes to establish, through a study of the details of the rules of practical cataloguing as set out in the AACR2 and a comparison of these rules with the practical applications found in the SANB since its implementation of AACR2, how usable a catalogue is produced by the application of the AACR2; how successfully the principles of cataloguing as established by the AACR2 may be applied in practice, to what extent the SANB has indeed based its cataloguing on principles, to what extent the specifically South African problems have tended to affect the application and interpretation of cataloguing principles,

and whether certain problems of cataloguing still remain unsolved by the AACR2. Sub-hypotheses (iii), (iv) and (v) will specifically be tested in this chapter, and the researcher will attempt to concentrate throughout on what is perceived as the problem areas of cataloguing principles and practice.

The researcher intends to scrutinise the cataloguing data published between 1981 - 1983 in the SANB, even though the AACR2 was introduced as the basis for cataloguing in 1980. The reason for this is that AACR1 cataloguing was used until the second quarter of the year 1980, and AACR1 cataloguing is therefore encountered together with AACR2 cataloguing in the 1980 edition of the SANB. In addition it seemed sensible to allow some time for the cataloguers to get used to the new format, so that it will be assumed that discrepancies and interpretations from 1981 onwards are not to be ascribed to inexperience but to conscious decision.

The methodology proposed by the researcher is to approach the SANB and to select examples in a way which one might use for looking at a rather complex literary text: by careful reading and choosing of examples that seem representative, combined with discussion. The examples chosen are by no means exhaustive, but the researcher has at all times aimed to avoid any possible bias, to show what was seen to be SANB policy and practice, and to relate these to the AACR2 rules and published discussions of these rules. No attempt has been made at statistical sampling: such an approach did not seem applicable in a study such as this where the researcher wished to look at

interpretations of rules and principles which do not seem to be easily quantifiable. The researcher has however attempted to remain objective in both the selection of examples and the discussion relating to the examples.

4.2 Catalogues and Bibliographies

It is at the outset important to emphasize the distinction between a library catalogue and a national bibliography such as the SANB (see also definitions in 1.4), as their general similarity may lead one to disregard the differences. In this study the researcher proposes to use the SANB catalogue records as models of library cataloguing as it is practised in South Africa. This would appear to be a reasonable assumption, as the State Library publishes, in addition to the SANB, a weekly card service with SANB catalogue records for libraries that wish to use these records in their card catalogues: SANB records have in other words long been regarded as the equivalent of library catalogue entries.

There are, however, differences in the aims and principles according to which these two kinds of catalogue are compiled. In chapters 2 and 3 of this work the twin functions of a library catalogue, briefly expressed in terms of finding list and collocation, were discussed in detail. The term 'finding list' in this work has consistently referred to the function of uniquely identifying a work and establishing whether or not it was held in the collection. The term may also more specifically include the location of a work within the collection, but

in terms of the present investigation this is not relevant.

National bibliographies tend to favour the finding list function in the first sense above, and are not so concerned with collocation. Hickey (1980: 236) illustrated this point by stating that a printed bibliography indexing the different entries tends to emphasize the identification of a particular work in the first place, and only then the various forms in which it may appear. The other function of a library catalogue therefore, that of bringing together under a single heading all the manifestations of a particular work in the collection, is of lesser importance to a national bibliography, and can in fact only be pursued within the period of time allocated to each edition of the bibliography. Malinconico (1977: 316) stated that national bibliographies, unlike libraries, are not concerned with consistency of entry for time intervals longer than a cumulation period, and not always even for that length of time. Thus, being able to identify uniquely a physical publication adequately serves the primary function of the national bibliography.

This important difference in principle should be kept in mind in the discussion of specific aspects of cataloguing that affect the collocation function of the catalogue: access points in general and main entries in particular.

4.3 The Anglo-American Cataloguing Rules, 2nd ed.

A large number of general critical and descriptive studies of the

AACR2 have by now been published and it will not be very useful to summarize or discuss them here. The researcher does, however wish to restate briefly a few of the most important characteristics of the AACR2 before looking at the SANB interpretation of these rules, as the rules at all times form the basis of the SANB entries.

The AACR2 states (0.1) that the rules "are designed for use in the construction of catalogues and other lists in general libraries of all sizes." It therefore assumes - in the interests of international standardization - that it is possible to create a single set of rules applicable to all libraries (Duke, 1980: 79). At the same time, however, the makers of the code did realise that different kinds of libraries have varying requirements regarding the amount of detail in their bibliographic descriptions, with the result that the AACR2 provides for three levels of detail in the description of library materials. The SANB, as the major bibliographic agency in this country, provides third or fullest level descriptions which may be abbreviated by individual libraries for their own purposes.

The AACR2 may be seen as a set of rules for:

- a) the description of library materials
- b) the formulation of access points according to which a catalogue is ordered.

Chapter 1 of the AACR2 is a general chapter giving rules for the description of all library materials, and then chapters 2 - 12 deal with the description of particular types of library materials in turn.

Chapter 13 deals with Analysis. Chapters 2 - 12 do not have many

rules, but provide examples of aspects of the description of the types of material with which the individual chapters are concerned. Reference is constantly made to chapter 1 where the general rules are laid out and the general rules are illustrated by examples that are specifically relevant to the material being dealt with.

Each item that has to be catalogued, must be described according to a standard format, i.e. the description must contain the same basic components that have to be cited in the same order, using punctuation that is consistent and standardized at all times.

In order to achieve such standardization, the actual description is broken up into sections or areas which are formulated according to specific rules, and which are always cited in the following order:

1. Title and statement of responsibility
2. Edition
3. Material (or type of publication) specific details
4. Publication, distribution, etc.
5. Physical description
6. Series
7. Note(s)
8. Standard number and terms of availability.

Not all the areas are required to be present in any single description. Area 3 is only present in descriptions of cartographic materials and serials.

The impact of Part 1 of the AACR2 was summarized by Simonton (1980: 36) who stated that the the most important contribution of AACR2 is to be found in its handling of descriptive cataloguing. The code

provides instructions for the description of all materials currently collected by libraries, in an internationally accepted framework that deals consistently with all media and that promises to accommodate future media.

Part II, Headings, Uniform Titles and References deal with access points only and here no provision is made for differing approaches in various kinds of libraries. According to Duke (1980: 79) the second part of the rules does not supply any systematic alternative for different types of catalogues, as Part 1 provided in the three levels of description. The philosophy of access to public library catalogues he thus sees as no different from the philosophy of access to academic catalogues. This will probably not, however, create serious problems in practice as public and smaller libraries could simply limit the number of access points made for each work and thereby secure simplified or limited access to each work.

As described in 3.2.2.3, the AACR2 has incorporated the main entry principle and thus requires that main entries with added entries be assigned to records. In chapter 21 one finds the general rules for deciding upon these two kinds of access points. The examples in chapter 21 are particularly interesting, as they do not in any way prescribe the form that these access points may take, but provide explanations to particular problems, while the actual illustrations have to be sought later on in chapters 22 - 25. This may be regarded as an expression of the AACR2's implicit commitment to an approach based on conditions of authorship and a careful analysis of the

theoretical implications of the practical problems of cataloguing, as the essence of the problems themselves are analysed and considered before actual solutions are given: basic or general rules precede more specific ones.

The most innovative feature of Part 2 of the AACR2 may however be seen in its rejection of the concept of corporate authorship as discussed in 3.2.2.4 and its decision to base the rules for corporate main entry on pragmatic distinctions rather than traditional principles.

4.4 The South African Approach

In chapter 3 it was made clear that the principles of cataloguing may be divided into principles of description and of access which may in turn be regarded as more specific principles within the broader, 'sine qua non' principle of 'fulness and accuracy' prescribed by Panizzi. It is therefore within these two sets of principles, of description and access, that the researcher wishes to view the cataloguing of the SANB. The fulness and accuracy of these records will be scrutinised throughout, but an adherence to the principle of fulness and accuracy may at the outset be recognised as expressed by the fullest form (3rd level) cataloguing recorded in the SANB and the verification of all the records by basing the cataloguing on the actual works themselves as the State Library receives them under the Copyright Act. See also the definitions of the Dictionary Catalogue and the Classified Catalogue in 1.4. The SANB is a classified catalogue and as such is arranged in subject order according to the

Dewey Decimal Classification scheme.

4.5 Aspects of description

One of the major contributions of the AACR2 as discussed in 3.2.1 and 4.3 is to be found in its approach to descriptive cataloguing which applies a standard ISBD framework to the description of all library materials. In this section of the present thesis the researcher proposes to discuss four aspects of bibliographic description which are particularly relevant to the SANB, and relate them to a critical interpretation of the rules themselves as set out in the AACR2. The aspects to be investigated are the General Material Designation; the problems of bi- and multi-lingualism; the question of the ISBD punctuation and the policy of Annotation in the SANB with reference to the AACR2. In all these cases the SANB has provided one with noteworthy interpretations of the AACR2 which also serve to elucidate the practical implications of the rules themselves.

4.5.1. General Material Designation

The first indication in a catalogue record of the kind of material that is being recorded, is the General Material Designation (GMD), which functions as a signalling device indicating that the record in hand may not be of a printed text, but a motion picture, a manuscript, a microform or something else. The GMD, explains Maxwell (1978: 19), is a generic label which is noted early in the catalogue record to point out the general category of material to which an

item belongs, and to distinguish one such general category from another in a catalogue that contains records for different kinds of material.

The GMD is given in the AACR2 as an 'optional addition' and there are two lists of terms for use in British and North American libraries - representing the only instance that full agreement was not reached in the formulation of the AACR2.

The principle of the GMD was controversial since the publication in 1973 of Lewis's article Early warning generic medium designations in multimedia catalogues which discussed the desirability of using such indicators in catalogue records. Some cataloguers felt that such a device would be useful in informing users that an interesting item found in the catalogue is for example a video recording, not a book, so that expectations may be adjusted accordingly (Turner, 1981: 37). A large number of libraries, especially in Britain however, chose, as Lewis had originally suggested, not to exercise the option of including the GMD in the catalogue printout but to "confine the physical description of the item to area 5, where it properly belongs." (Ravilious, 1979: 80).

The strongest argument against this attitude that the specific material designation, which appears much later in the catalogue record as part of the physical description area, is sufficient to indicate the type of material involved, has turned out to be a purely pragmatic and user-oriented one. Hagler (1980: 80) explained that there can be no doubt that in spite of all the theoretical considerations, the only

convincing argument for the GMD is that few catalogue users ever read down as far as the physical description area!

It is immediately apparent that the SANB does not utilize the capacity of the AACR2 to describe all library materials according to a consistent framework to any great degree, as it is explicitly book-oriented. The SANB only includes a limited amount of 'non-book material' received through the Copyright Act, such as microforms and maps, and specifically excludes "picture strips, trade catalogues, parliamentary papers, sheet music, ephemera pamphlets of fewer than 5 pages, house journals and school magazines." (Introduction to the SANB).

The SANB has, following the Library of Congress (Cataloguing Service Bulletin No. 5 - 6 1979) decided not to use the GMD "text" for books and serials, but the American list of GMD terms for all 'non-book' items instead. As few such items are in fact catalogued by the SANB, the list is not extensively applied. Figure 4.1 provides some of the few examples.

In accordance with the SANB policy of cataloguing Afrikaans items in Afrikaans, the GMD also appears in translated form; see figure 4.2.

Rather surprisingly, one also encounters the unofficial GMD "atlas" in the 1981 edition of the SANB, although the AACR2 explicitly refers one in 3.0B1 to chapter 2 for the chief source of information for atlases; by implication an instruction to treat atlases as monographs. Compare

428.6 J

Lawrence, Nancy J. (Nancy Joan)
The Beehive scheme [kit] N.J. Lawrence, M. Okonski. - Cape Town: Juta, 1981. - 28 books (ill., 22 cm.), readiness pack, flash cards, reading cards, work cards
Bk. 1: Approach: Monkey tricks. - 1981. - 24 p. - ISBN 0 7021 1274 7 (pbk): R1.25. (82/2717)
Bk. 1: Basic: Binky. - 1981. - 38 p. - ISBN 0 7021 1275 5 (pbk): R2.50. (82/2718)
Bk. 1: Supplementary: Play-ways. - 1981. - 21 p. - ISBN 0 7021 1276 3 (pbk): R1.25. (82/2719)
Bk. 2: Approach: Lots to see. - 1981. - 22 p. - ISBN 0 7021 1277 1 (pbk): R1.25. (82/2720)
Bk. 2: Basic: It is fun to be six. - 1981. - 39 p. - ISBN 0 7021 1278 X (pbk): R2.50. (82/2721)
Bk. 2: Supplementary: Honeybee. - 1981. - 22 p. - ISBN 0 7021 1279 8 (pbk): R1.25. (82/2722)
Bk. 3: Approach: High jinks. - 1981. - 31 p. - ISBN 0 7021 1280 1 (pbk): R1.25. (82/2723)
Bk. 3: Basic: A day with Jeff. - 1981. - 39 p. - ISBN 0 7021 1281 X (pbk): R2.50. (82/2724)
Bk. 3: Supplementary: Cheer up. - 1981. - 23 p. - ISBN 0 7021 1282 8 (pbk): R1.25. (82/2725)
Teacher's manual. - 1981. - 59 p. - ISBN 0 7021 1285 2 (pbk): R3.25. (82/2726)

796.0968

Anderson, P.G. (Paul Gerard)
An Investigation into the effect of race and politics on the development of South African sport (1970-1979) [microform]/ Paul Gerard Anderson. - [Stellenbosch]: University of Stellenbosch, 1979. - 7 fiches; 11 x 15 cm.
Bibliography: p. 313-348. - Thesis (Ph.D.Phys.Ed) - University of Stellenbosch, 1979.
20c per fiche (limited circulation)
(MFM 2973)

Figure 4.1

251.001

Cilliers, J.H. (Johannes Hendrik)
Veni creator spiritus [mikrovorm]: 'n homileties-sistematiese besinning oor die belang van die reformatore, Karl Barth, Rudolf Bultmann en Rudolf Bohren vir die pneumatologies-begronde preekleer: Johannes Hendrik Cilliers. - [Stellenbosch]: Universiteit van Stellenbosch, 1979. - 6 fiches; 11 x 15 cm.
Bibliografie: p. 255-279 - Tesis (M.Th.) - Universiteit van Stellenbosch, 1979
20c per fiche (beperkte sirkulasie)
(MFM 2868)

912.68

Suid-Afrika: toeristekaart [landkaart].
Nasionale Toeristeburo van die Departement van Toerisme, Republiek van Suid-Afrika. - Skale varieer. - Pretoria: Die Dept., [1979]. - 33 x 30 cm. gevou tot 21 x 11 cm.
Bevat 'n indeks van plekke en 'n lys van besienswaardighede
Gratis
Bosveld Transvaal. - [1980]
Kaapse Kusstreek. - [1980]
Ontspanningsland Natal. - [1980]

820.9283ZA

Jenkins, E.R. (Elwyn Rought)
The World of young White South Africans [microform]: a study of some writing by English-speaking adolescents/ by Elwyn Rought Jenkins. - [Pretoria]: University of South Africa, 1980. - 5 fiches; 11 x 15 cm.
Thesis (D.Litt. et Phil.) - Unisa, 1980. - Includes a bibliography
Limited circulation
(MFM 3308)

912.6822

1981 map of Germiston [map]: compiled and produced by Map Studio. - Scale 1:21 400. - Sandton (P.O. Box 78231, Sandton 2146): A.C. Braby on behalf of Germiston Publicity Association, [1981?]. - 1 map; 97 x 52 cm. on sheet 122 x 92 cm.
Inset. Includes street index and advertisements
(K.S. 5993)

912.68

South Africa [map]: compiled and produced by Map Studio = Suid-Afrika/ saamgestel en versorg deur Map Studio. - [3rd ed.]. - Scale 1:2 400 000. - Johannesburg: Map Studio, 1980. - 1 map: col.; 62 x 82 cm. on sheet 77 x 100 cm. folded to 20 x 14 cm.
Cover title: RSA road map. - Includes traffic signs and index to towns
Omslagtitel: RSA-padkaart. - Bevat verkeerstekens en indeks tot dorpe
ISBN 0 907089 06 3: R3,25

912.687

Kimberley/Bloemfontein - Port Elizabeth [kaart]: [saamgestel en geteken deur die Automobiël-Assosiasie van Suid-Afrika] = Kimberley/Bloemfontein - Port Elizabeth. [compiled by the Automobile Association of South Africa]. - Skaal 1:1 562 500. - [Johannesburg: Die Assosiasie], 1980. - 6 krte: gekl.; 15 x 10 cm. of kleiner op vel 43 x 26 cm. gevou tot 9 X 21 cm.
RM-8
Inleg: Colesberg. Skaal 1:62 500; Graaff-Reinet. Skaal 1:53 200; Cradock. Skaal 1:33 400. - Op verso: Kimberley. Skaal 1:43 500. - Bloemfontein Sentrale gebied. Skaal 1:40 000. - Uitenhage. Skaal 1:37 100. - Port Elizabeth. Skaal 1:66 700
Insets: Colesberg. Scale 1:62 500; Graaff-Reinet. Scale 1:53 200; Cradock. Scale 1:33 400. - On verso: Kimberley. Scale 1:43 500. - Bloemfontein Bypass Scale 1:294 200. - Bloemfontein Central area. Scale 1:40 000. - Uitenhage. Scale 1:37 100. - Port Elizabeth. Scale 1:66 700
Prys onbekend = Price unknown

Figure 4.2

the following two examples:

912.6822

Street guide to Witwatersrand [atlas]:
its sights, entertainments and places of
interest, worship and sport, with a full range
of street maps and comprehensive index/
produced by Map Studio = Straatgids vir
Witwatersrand: sy besienswaardighede,
vermaaklikhede, plekke van aanbidding en
sportbyeenkomplekke met 'n volle reeks
straatkaarte en 'n veelomvattende indeks/
opgestel deur Map Studio. - 3rd ed. - Scale
1:21 400. - Johannesburg: Map Studio, [1979]. -
vi, 197 p.: col. maps; 26 cm.
Cover title: Witwatersrand: 149 pages
of indexed maps
Omslagtitel. - Witwatersrand: 149
kaarthladsye met bladwyser
ISBN 0 909060 85 1: R5,75

(81/0701)

912

Van Schaik's large print atlas/ edited
by Harold Fullard with the co-operation of
geography specialists in southern Africa. -
43rd ed. - Pretoria: Van Schaik, 1981. -
xvi, 48, [17] p.: chiefly col. maps; 29 cm.
Copyright held by Philip & Son, London. -
New enl. ed. - Index
ISBN 0 627 01151 9: R4,75

(A82/0211)

Figure 4.3

One may, however, assume that this is simply a cataloguing error due to insufficient experience with AACR2, as it does not appear again after 1981.

4.5.2 Bi- and Multi-Lingualism

As the SANB purports to catalogue, with a few exceptions, all the materials received under the Copyright Act, it necessarily has to deal not only with a large amount of material in both the official languages, English and Afrikaans; it also has to record a considerable amount of material published in a number of the South African Black languages. The official position on the cataloguing of materials in different languages is as follows: "Afrikaans items are... catalogued in Afrikaans and multi-lingual works are catalogued in the official language of the title proper, or if this does not apply, in the

official language appearing first in the chief source of information."
(Introduction to SANB).

The SANB catalogue is therefore bilingual, in English and Afrikaans; but apart from the Afrikaans materials that are catalogued in Afrikaans, the SANB follows the instructions set out in rule 1.0E of the AACR2 to record title and statement of responsibility, edition, publication, distribution, etc., and series statements in the language of the item and all other statements in the language of the catalogue, which is then taken to be English. Materials in any of the Black languages are therefore catalogued in the language of the work itself in areas 1,2,4 & 6 of the record, and in English for any of the other areas in the record.

Bilingual and multi-lingual publications are common in South Africa and such publications are especially frequently encountered in government and other official and semi-official publications.

The suggestion given in AACR2 rule 1.7A3 to use "the original script whenever possible rather than a romanization" in noting names or titles that appear on the chief sources of information in non-roman scripts, is not followed by the SANB presumably because of practical problems of reproduction. See figure 4.4.

234.1

Pappas, G.A.

Giati uparchoun arrostoi kai pos mporeis na pares therapeia: e biblike aletheia peri tes eleutherias tou anthropos apo ten astheneia kae e pege ton astheneion tha boethese pollogs pou paschoun na apotinaxoun to phortio pou chroni... to koubaloun kai na eleutherothoun: G.A. Pappas. - Johannesburg. [Fontainebleau (P.O. Box 77202, Fontainebleau 2032): G.A. Pappas, 1979. - 60 p.; 21 cm.

Titlepage and text in Greek alphabet. - English title supplied by publisher: Why there are sick: how they can be healed
ISBN 0 620 04290 7: R0,75

(81/0001)

297.122

Zardad, M. (Mohammed)

Hedaa ye tul mu hu llimi Litta j weed = Teacher's guide to Tajjweed: a new approach. Part 2/ by M. Zardad. - (Crawford (222 Lawrence Rd, Crawford 7764): M. Zardad, [1980]. - 95 p.; 25 cm.

Cover title. - Title-page and text chiefly in Arabic script. - Transliteration of the title proper partly taken from cover
ISBN 0 620 04877 8: R4,50

(81/1259)

Figure 4.4

4.5.2.1 Parallel Titles

Parallel titles especially, are a frequent source of confusion in cataloguing. The AACR2 simply defines a parallel title as "the title proper in another language and/or script." (AACR2: 568). In a multi-lingual country such as South Africa parallel titles are frequently encountered; as far as government and other official publications are concerned, they may almost be regarded as the norm rather than the exception. It therefore follows that the SANB frequently needs to invoke the rules applicable to parallel titles.

In a penetrating study of the problems of interpretation of the AACR2 rules on parallel titles, Abrera and Lin (1982: 31) clearly showed that the two principles governing the codification of the rules on parallel titles are firstly a principle of interrelationship (i.e. transcribing a data element in its relationship to other data elements), and secondly a principle of structured format (i.e. transcribing a data element in a prescribed order). From a

theoretical point of view, these two principles are mutually exclusive. Rules should be formulated based on one but not both principles if consistency of stipulations in the code is to be achieved.

In other words the rules on parallel titles cannot be applied entirely consistently, as the position of the parallel title in each record differs (op. cit.: 32); depending on the cataloguer's interpretation of the title page. Abrera and Lin show that the AACR2 rule 1.0D2, giving the data elements set out in the order required for second level of description, places the parallel title immediately after the title proper and the GMD. This rule may then directly contradict 1.1E5 which instructs that other title information should follow the title proper to which it belongs, and only then should the parallel title be introduced. A cataloguer using the pattern set out in 1.0D2 as an algorithm for a bibliographic description may therefore produce an entry rather different from that of a cataloguer basing the order of the data elements on 1.1E5.

Abrera and Lin (1982: 33) see this kind of problem as part of the larger one of interrelationship and interpretation of a set of rules. Where rules are not clearly formulated, or where they are based on conflicting principles, the ambiguity that is inherent in the formulation of the rules will affect the quality of the bibliographic data bases since duplicate records are bound to appear due to the diversity of rule interpretation. Abera and Lin also point out the confusing rule regarding parallel titles, 1.1D3, which indicates that

the original title of a translated work, given on the chief source of information, may or may not be regarded as a parallel title, depending on the position of the original title on the title page, whether or not the work itself contains any text in that language: "Record an original title... as a parallel title... if the original title appears before the title proper in the chief source of information" (AACR2: 1.1D3). They do not even point out that this may also add confusion to the interpretation of the preceding 1.1D1 according to which the cataloguer would be inclined to regard the first of the titles on the title page as the title proper, and not a subsequent one.

A further complication arises from this rule, which then goes on to stipulate that the original title is to be given in a note in all other cases except for the instances outlined. This would imply that if a title page bore a translated title as well as an original title, with the text in the translated language only, these two titles are not to be regarded as parallel titles, but the original title should be given in a note. Abrera and Lin comment (op. cit.: 35) that it seems impossible to find a logical explanation for the stipulation in this rule.

From the following example it seems as if the SANB does not adhere rigidly to this rule; the English title is called a parallel title, but this title information was not taken from the chief source of information; it appeared on the cover only and the information is therefore given in a note only.

294.544
Sivananda, Swami
 Sthree dharma/ Swami Sivananda. - 2nd South
 African ed. - Durban: Divine Life Society,
 [1981]. - vii, 137 p.: ill.; 22 cm.
 Text in English. - Parallel English title
 on cover: Ideal womanhood
 ISBN 0 949971 29 4(pbk): R2,00
 (82/1174)

Figure 4.5

See also:

297.122
Zardad, M. (Mohammed)
 Hedaa ye tul mu hu llimi Litta j weed =
 Teacher's guide to Tajjweed: a new approach.
 Part 2 by M. Zardad. - (Crawford (222 Lawrence
 Rd, Crawford 7764): M. Zardad, [1980]. - 95 p.:
 25 cm.
 Cover title. - Title-page and text chiefly in
 Arabic script. - Transliteration of the title
 proper partly taken from cover
 ISBN 0 620 04877 8: R4,50
 (81/1259)

Figure 4.6

In this case the transliterated title is indeed given as a parallel title.

Confusion may arise from the strict application of 1.1F10 and 1.1F11; as is illustrated by figure 4.7.

611.0076
Oosthuizen, S. (Susan)
 Werkboek vir anatomie = Anatomy workbook/
 S. Oosthuizen; Afrikaanse vertaling deur A.A.
 Basson. - Durban: Butterworth, c1981. -
 105 p.: ill.; 30 cm.
 Teks in Afrikaans en Engels. - Vir studente
 ISBN 0 409 08009 8: R9,95
 (A82/0054)

Figure 4.7

It does not seem logical to follow the Afrikaans statement of responsibility by the English parallel title, but here at least, strict adherence to the rules would not cause discrepancies in interpretation.

In general, however, the SANB treatment of parallel titles is clear and unambiguous, even though the records sometimes become very long.

As a final point it needs to be noted that the SANB consistently treats top-to-tail (Têtes-bêches) items as if they were items with parallel titles, "the English title being arbitrarily chosen as the title proper." (Introduction to SANB). The AACR2 does not specifically address this problem: it instructs one (1.0H) to prefer, in items with several chief sources of information in different languages, the English source. The AACR2 does not explicitly allow one to treat another separate title page as a parallel element, but in a multi-lingual country this seems to be a logical solution. See the illustration below.

614.5320968

Gear, J.H.S. (James Henderson Sutherland)
Malaria in southern Africa = Malaria in
suidelike Afrika/ J.H.S. Gear, C.F. Hansford,
R.J. Pitchford. - Pretoria: Dept. of Health,
Welfare and Pensions, 1981. - 49, 51 p.:
ill. (some col.), maps; 21 cm.
Two sections arranged top-to-tail. -
Illustrator: Sonja Vaughn
ISBN 0 621 05746 0: Gratis

(OP/7371)

614.5320968

Malaria: what you should know about it/
Department of Health, Welfare and Pensions =
Malaria: wat u daaromtrent behoort te weet/
Departement van Gesondheid, Welsyn en
Pensioene. - Pretoria: The Dept., 1981. - 14 p.:
ill. (some col.); 15 x 21 cm.
Text in English and Afrikaans. - Two sections
arranged top-to-tail
ISBN 0 621 06043 7(pbk): Gratis

(OP/7457)

615.60289

**Guidelines for the responsible use of
medicines/ Department of Health, Welfare and
Pensions = Riglyne vir die verantwoordelike
gebruik van medisyne/ Departement van
Gesondheid, Welsyn en Pensioene. - Pretoria:
Govt. Printer: The Dept. [distributor],
1981. - 6, 6 p.; 21 cm.
Text in English and Afrikaans. - Two
sections arranged top-to-tail**

793.7

**Conquer the cube: the snappy solution =
Klop die blok: die kitsoplossing. - Cape Town
(Strand Towers, Strand St., Cape Town 8001):
D.M.D., [1981?]. - 6, 5 p.: ill.; 21 cm.
Text in English and Afrikaans. - Two sections
arranged top-to-tail
ISBN 0 620 05644 4**

(82.0644)

Figure 4.8

4.5.3 Punctuation

At the time of the publication of the AACR2 in 1978 the ISBD

punctuation was still highly contentious, but has by now been generally accepted by the library world. By 1982 Milcetic could state that the ISBD punctuation no longer seemed so radical or complex, and that the original fear of the ISBD changes proved unfounded (1982: 180).

Some of the original problems, voiced by Lubetzky, were that a catalogue entry based on ISBD would contain unnecessary repetitions (e.g. the name of the author repeated in the statement of responsibility, even though it already appeared as the main entry); and that the so called 'incomprehensible' punctuation would confuse the user. He specifically stated that the AACR2 rules would cause entries to be cluttered with "obtrusive redundancies and esoterics that will only obscure the content of the entries and obstruct the use of the catalogue" (Lubetzky, 1979b: 156).

The question of redundancy versus brevity is specifically addressed in the discipline of information theory, which is considered in more detail in Chapter 5 of this work. Campbell (1982: 68) explained that in nearly all forms of communication, more messages are sent than are strictly necessary to convey the information intended by the sender. Such additional messages diminish the unexpectedness or the surprise effect of the information itself, thus making it more predictable. This extra amount of predictability is called redundancy, and may be regarded as a very important concept in information theory.

In other words, Campbell explained that redundancy reduces error by making certain combinations more probable; thus increasing the predictability of the message for the receiver, and at the same time also reducing error and inaccuracy. When a message is highly unpredictable it is very difficult to see whether it contains error or not. As redundancy and thus predictability increases, the possibility of error diminishes. This is exactly what has happened in the AACR2. Lubetzky's argument presupposes not only an errorless encoding of the cataloguing message, but also the faultless decoding by the user. When Lubetzky stated that it should be obvious that as an eye moves over a page, the less reading matter there is, the faster it will be comprehended, as extraneous matter inhibits the speed of reading (Nature & Future of the Catalog: 162); he was presupposing an ideal situation where errors of communication do not exist. The AACR2 on the other hand, has built into the catalogue entry an increased redundancy, thereby also increasing the predictability and reducing the possibility of error in the records thus obtained.

The repetition of the statement of responsibility after an access point consisting of the same name may indeed appear redundant; on the other hand it reinforces the reader in his or her search, by giving more detail regarding the responsibility that the person or body named in the main entry has for the work, and may also serve to correct errors that appear even on title pages. (See the second example in the first column below.)

398.209546 J - 823.3ZA J

Machanick, E.A.L. (Edna Anne Love)
Legends of Kashmir/ translated from Hindi
with original illustrations by E.A.L.
Machanick. - Cape Town (31 Quarterdeck Rd.,
Kalk Bay, Cape Town 7975): E.A.L. Machanick,
[1982]. - 67 p.: col. ill.; 29 cm.
Subtitles in Hindi script
ISBN 0 620 05709 2: R7,95

(A82/0701)

398.20968491 J - 896.327S5303 J

Liquori-Reynolds, Rosalie
Khokho n'wavulolo/ Rosalie Liquori-Reynolds
[sic]; illustrated by June Johnson. -
Doornfontein [Johannesburg]: Educum, 1981. -
[21] p.: col. ill.; 27 cm. - (Five star
bedtime series)
Tsonga translation from the English of:
Khok[h]o the lazy. - Doornfontein: Educum,
1981. - Also available in Afrikaans, Northern
Sotho, Southern Sotho, Tswana, Venda, Xhosa
and Zulu
ISBN 0 7980 0314 6: R5,40

(83/0128)

398.24 J - 823.3ZA J

Pitcher, Diana
The Calabash child: African folk-tales/
adapted and re-told by Diana Pitcher;
illustrated by Meg Rutherford. - Cape Town:
David Philip, 1980. - 64 p.: ill.; 26 cm.
Adaptation of: Tokoloshi. London: Skilton & Shaw.
ISBN 0 908396 34 1: R4,95

(A81/0256)

669.005 S

Balaes, G.
The Analysis, by atomic-absorption
spectrophotometry, of activated charcoal/
investigators: G. Balaes and R.V.D. Robért;
National Institute for Metallurgy, Analytical
Chemistry Division. - Randburg: NIM, 1980. -
4 p.; 30 cm. - (Report; no. 2060)
Programme no. 504. - Project no. 10679. -
Project report no. 1. - Synopsis in Afrikaans
and English
ISBN 0 86999 514 6: Gratis

(A81/0281)

823.2ZA

Smith, Pauline (Pauline Urmson)
The Little Karoo/ by Pauline Smith; with
a foreword by Guy Butler, an introduction by
Arnold Bennett and a preface by William
Plomer. - New ed. [i.e. 1st South African
ed.]. - Cape Town: Balkema, 1981. - xx,
139 p.; 21 cm.
Originally published: London: Jonathan
Cape, 1925
ISBN 0 86961 1305 (incorrect). - ISBN 0 86961
130 5 (corrected): R7,50

(82/2239)

823.3ZA - 896.327K2103

O'Donoghue, Bryan (Bryan Patrick)
Sibaka se si tala/ Bryan O'Donoghue; i isizwe
mwa Silozi ki Joel Mutonga. - Windhoek:
Gamsberg, 1982. - 201 p.; 21 cm.
Lozi translation from the English of: The
green place. - Johannesburg: Perskor
ISBN 0 86848 157 2 (pbk): R8,34

(82/2315)

Figure 4.9

The originally much maligned system of ISBD punctuation may thus be seen as more than simply using punctuation marks as delimiters or dividers between different bibliographic elements in order to serve as an aid in the identification of each element (Milcetic, 1980: 177 - 178) so that the international exchange of cataloguing data may be facilitated. The ISBD punctuation may in addition be regarded as another (fairly unobtrusive) method of increasing the redundancy of the message in order to avoid inaccuracies at the input or cataloguing stage: the average user probably ignores rather than understands the

meaning of the slashes, colons and other signs. The cataloguer on the other hand not only describes the item in hand in words, but by using the meaningful punctuation symbols makes doubly sure that the information following a symbol is indeed correct.

As far as the SANB is concerned, the introduction of ISBD punctuation seems to have been incorporated unobtrusively and without too much effort. A comparison of AACR2 SANB entries with earlier entries shows that ISBD punctuation should indeed not confuse uninitiated users. The increased redundancy may also enhance the accuracy of cataloguing as explained above. In figure 4.10 the first column illustrates pre-ISBD punctuation as used in the SANB. The second column illustrates the standard AACR2 punctuation.

<p>701 Bradshaw, Brian : Art and totality. Grahamstown [Rhodes University, School of Fine Art] 1969. 23p. 22cm. 75c. Four talks broadcast by the English Service of the S. A. B. C. from 6th to 27th November, 1968 in the series "University of the air".</p> <p>701 - 801 Suid-Afrikaanse Akademie vir Wetenskap en Kuns : Die Kuns en die gemeenskap; referate gelewer by die jaarvergadering... in Junie 1967 in Bloemfontein. [Kaapstad] Nasionale Boekhandel [1969] [viii]111p. 22cm. R2.55.</p> <p>711.061 South Africa (Republic). Department of Community Development : Report... on the activities of the department, including reports on the activities of the National Housing Commission, the Bantu Housing Board and the Community Development Board, for the period 1st January, 1965 to 31st December, 1965. Pretoria, Government Printer, 1967. [iv]23p. illus. 30cm. (South Africa (Republic). R. P. series, 1967, No. 74/1967). R1.85(South Africa) R2.35(overseas) Post free.. Teks in Afrikaans en Engels.</p>	<p>020.71168 Fouché, B. (Benjamin) Survey of institutions providing professional training in Library and Information Science and of full-time tutors and researchers in Library and Information Science in the Republic of South Africa in 1979/ compiled by B. Fouché, P.J.A Roux, N. Thirion; Research Centre for Library and Information Service, Department of Library Science, University of South Africa. - Potchefstroom: SA Institute for Librarianship and Information Science, 1980. - viii, 104 p.; 21 cm. Includes bibliographical references ISBN 0 949946 32 X: Gratis (limited circulation) (81/0286)</p> <p>016.937 - 937.0016 Transvaal. Onderwysdepartement. Biblioteek en Oudiovisuele Hulpdiens Bronne beskikbaar in die Onderwysbiblioteek vir die gebruik van onderwysers van Latyn in die sekondêre skool/ Transvaal Onderwysbiblioteek en Oudiovisuele Hulpdiens = Sources available in the Education library for the use of teachers of Latin in the secondary school/ Transvaal Education Library and Audio-visual Ancillary Service. - Pretoria: Transvaal Onderwysdept, 1981. - 4 p.; 30 cm. - (Bibliografie. Tweede reeks/ Transvaal. Onderwysdepartement. Onderwysbiblioteek en Oudiovisuele Hulpdiens; no 30 = Bibliography. Second series/ Transvaal. Education Department. Library and Audio-visual Ancillary Service; no. 30) Omslagtitel ISBN 0 7991 0332 2: Gratis (OP(S) Tvl. 23/4)</p>
--	--

Figure 4.10

In addition the delimitation signals could be useful in an international exchange situation. Afrikaans and the Black languages are not well known outside South Africa and records for works in these languages may more easily be comprehended when the punctuation symbols also signify the beginnings and ends of the specific areas in the catalogue record as explained in 2.5. Figure 4.11 illustrates this point.

<p>612.63 Basson , Sybil Uzothola umntwana?/ ibhalwe ngu Sybil Basson; ihunyushwe ngu Felix Dlamini, umdwebi ngu Rhona Collett. - Durban: Operation Upgrade of SA. c1972. - 33 p.: ill.; 20 cm. Zulu translation from the English of: Going to have a baby? - Durban: Operation Upgrade of SA, 1972. - Published in consultation with the State Department of Health, RSA ISBN 0 86851 019 X(pbk): R0,60 (82/1444)</p>	<p>839.3614 Du Randt , W.S.H. (William Stephen Humphries) Die Ewige reis: 'n leersisteen volgens leerdoelwitte by Joernaal van Jorik/ deur W.S.H.- du Randt. - Humewood, Port Elizabeth (Posbus 13188, Humewood 6013): Opvoedkundige- en Inligtingsisteme, [1980]. - 47 p.; 29 cm. - (Leersisteme vir die onderwys. Die kontekstuele vraag) Bibliografie: p. 46-47 ISBN 0 620 05142 6: R2,95 (beperkte sirkulasie) (A81/0504)</p>
<p>896.327S31.12 Moroke , S.A. (Samson Alexander) Puo ya mme kopelo/ mmoki ke S.A. Moroke. - King Williams' Town: Educum, 1979. - 70 p.; 21 cm. English title supplied by publisher: The language song of my mother: [poetry] [Tswana] ISBN 0 7980 0255 7: R1,00 (81/0407)</p>	<p>839.3614 Opperman , D.J. (Diederik Johannes) Komas uit 'n bamboesstok: synde die mirakelagtige terugkeer na lewerversaking van ene Marko Polo ... / bewerk deur D.J. Opperman. - [2de uitg., 3de dr.] - [Kaapstad]: Human & Rousseau, 1979. - 137 p.; 21 cm. ISBN 0 7981 0991 2: R8,50 (81/1434)</p>
<p>896.327S31.32 Monyaise , D.P. Semakaleng (Daniel Phillip Semakaleng) Omphile umphi Modise/ mokwadi ke D.P. Semakaleng Monyaise. - Rev. ed. [i.e. 2nd ed]. - King William's Town: Bona Press, 1976. - 69 p.; 21 cm. English title supplied by publisher: The life of Dr. Modise [Tswana] ISBN 0 7980 0209 3: R0,85 (81/0497)</p>	<p>839.3634 J Lochner , Helena J.F. (Helena Johanna Francina) Kammaland: vyftien stories vir kinders uit die verhaleskat van Helena J.F. Lochner/ met meer as vyftig tekeninge deur Dorothy Hill. - 5de dr. - Kaapstad: Human & Rousseau, 1982. - 160 p.: ill.; 23 cm. Die meeste verhale in hierdie bundel het as Eekhoringsboekies in slapbanduitgawe verskyn ISBN 0 7981 0301 9: R7,50</p>

Figure 4.11

4.5.4 Annotation

Maxwell (1980: 82) described the function of annotation by saying that

notes amplify the formal description given in the preceding areas, thus providing information left out of the earlier areas. Certain notes are indispensable; others are made at the discretion of the cataloguer, keeping in mind the importance of the work and the needs of the users of a particular library.

A cataloguer is thus to a certain extent free within the constraints of the cataloguing rules when it comes to the annotation of an item in hand. AACR2 rule 0.27 reads:

"All notes described in the chapters of Part I may be considered to be optional in that their inclusion in the entry depends on the nature of the item described and the purpose of the entry concerned. In addition, the wording of notes in the examples is not prescriptive (i.e., another wording may be chosen provided that it meets the general requirements of brevity and clarity)."

The cataloguer therefore has to decide to what extent an item should be described in the annotation area in order for such an entry to be optimally useful.

In her analysis of the note area of a catalogue record, Maxwell (1980: 82 - 83) explained that certain notes should be regarded as indispensable. These include notes that give the information necessary to justify an added entry. The rationale for each added entry should at all times be clear from some statement in the catalogue entry. Such information can be included in the first six areas of the entry only if it is found in a prominent position, and if the information does not appear in these areas of the entry it has to be given in the notes areas. See also the section on added entries

in 4.6.2.2.

The SANB does not explicitly state its policy regarding annotation, but from a study of the SANB entries it is clear that brief and succinct notes are made fairly extensively. Unfortunately SANB 1981 - 1983 does not list as tracings the added entries belonging to each main entry which is given in full once only in the main Dewey Subject sequence. It is therefore difficult to establish to what extent Maxwell's indispensable notes are made in the SANB to justify added entries, but the following may be regarded as examples; where in every case the names noted in area 7 may be used to access the main entries through the index:

262.7

I will build my church.- Halfway House
[Transvaal]: Living Word Publishers, [1980]. -
22 p.; 21 cm.
Author: J.R. Stephens; editor: J.N. Swart. -
Also available in Afrikaans
ISBN 0 908384 09 2: R1.00

(81 0765)

388.413220968

South Africa . Commission of Inquiry
into Bus Passenger Transportation in the
Republic of South Africa
First interim report of the Commission of
Inquiry into Bus Passenger Transportation
in the Republic of South Africa: the
desirability of a co-ordinating body or
bodies for various metropolitan areas
Republic of South Africa. - Pretoria: Govt.
Printer, 1982. - vi, 12 p.; 1 map; 30 cm.
RP 29-1982. - Chairman: Peter Johannes
Welgemoed
ISBN 0 621 07059 9(pbk): R5.00 (R5.95 abroad).
Post free

(OP: 7434)

398.210943 I - 839.3635 J

Grimm brothers
Ingungumbane nentenesha ' abafu bakwa-Grimm;
ilolongwe yadwetshwa ngu Wendy Watson. -
Mandini: Qualitas, 1977. - [26] p.; col. ill.;
19 x 25 cm.
Zulu translation from the English of: The
hedgehog and the hare. - Cleveland: World
Publishing Co., c1969. - Translated by A.A.
Khuzwayo
ISBN 0 86844 072 8: R4.40

(82 0129)

428.6 J - 439.3686 J

Melser, June
Help my. - Kaapstad: Tafelberg, 1982. - 48 p.;
gekl. ill.; 22 cm. - (Ek lees self)
Afrikaanse vertaling uit Engels van: Help me. -
New Zealand: Shortland Publications, c1980. -
Omslagtitel. - Outeur: June Melser. Vertaler:
Linda Rode. Illustreerders: Philip Webb ... [et
al.]
ISBN 0 624 01707 9(pbk): R3.50

(82/2793)

612.015028 S

Bayliss, Robin
An Evaluation of the instrumentation laboratory
system 508 analyser. South African Institute for
Medical Research, Biochemical Methods and
Equipment Unit and Department of Chemical
Pathology. - [Johannesburg (P.O. Box 1038,
Johannesburg 2000)]: The Institute, 1982. - 39
leaves; 30 cm. - (Technical report: no. 21)
Cover title. - Authors: Robin Bayliss, Ronald
Georges
ISBN 0 620 05798 X(pbk): Gratis (limited
circulation)

(A82 0484)

823.914 J - 839.3635 J

Dickinson, Mary
Ben se bed; Mary Dickinson; illustrasies deur
Charlotte Firmin. - Kaapstad: Human & Rousseau,
1982. - [29] p.; gekl. ill.; 18 x 22 cm.
Afrikaanse vertaling uit Engels van: Alex's
bed. - London: Andre Deutsch, 1980. - Vertaler:
Anna Kleynhans
ISBN 0 7981 1283 2: R5.50

(82/2215)

Figure 4.12

Annotation is also extensively used to elucidate the entries for the many works that are published in the various Black languages in South Africa. Such works are frequently published in the relevant languages only, with no accompanying explanation of titles or content in English or Afrikaans. The SANB then consistently applies AACR2 rule 2.0B2 (for monographs) that instructs that any source may be used for information in the notes area of the catalogue entry; and provides a translation of the title of the work from information supplied by the publisher. This could be critically regarded as inconsistent selectivity on the part of the compilers of the SANB; who thus state by implication that the entries in the Black languages are 'incomprehensible' and that the SANB is really only for users of the official languages English and Afrikaans. This impression is reinforced by the fact that the titles of works in other 'European' languages such as German and Dutch are not translated in the annotation. Both these points are illustrated by Figure 4.13.

234.161

Umyalela KaYesu Krestu - UBhaptizo. -
Roodepoort: Trulite Publications, 1980. -
[1] p.; 21 cm.
Translation of: A command of Jesus Christ -
baptism [Xhosa]. Roodepoort: Baptist Mission
Publications, 1978. - Also available in
Tswana
ISBN 0 86883 053 4: R0,10

(81/0140)

896.327S31.32

Monyaise, D.P. Semakaleng (Daniel
Phillip Semakaleng)
Go ša baori/ D.P. Semakaleng Monyaise. -
8th impr. - Pretoria: Van Schaik, 1980. -
123 p.; 21 cm.
English title supplied by publisher: It is
the evildoer who gets burnt [Tswana]
ISBN 0 627 00285 4: R1,75

(81/0648)

896.327S32.32

Ngoepe, J.D. Noko (Jeremiah Debello
Noko)
Seswai sa ditabanatodi/ J.D. Noko Ngoepe. -
Pretoria: Van Schaik, 1980. - 88 p.; 22 cm.
English title supplied by publisher:
A honey-sweet taste of short
stories [Northern Sotho]
ISBN 0 627 01113 6: R2,50

(81/0969)

896.327S32.22

Tema, J.P.
Ke sefe senakangwedi/ ka J.P. Tema. - King
William's Town: Educum, 1976. - 50 p.; 22 cm.
English title supplied by publisher: Which is
the fire-fly? [Northern Sotho]
ISBN 0 7980 0204 2: R0,80

(81/0621)

Titles translated

continued over/...

438.243936 J

Avenant, F.C. (Floris Cloete)

Deutsch für Anfänger: F.C. Avenant. -

13de dr. - Goodwood: Nasou, 1982. - 60 p.; 22 cm.

ISBN 0 625 00352 7(pbk): R 1,95

(82/2360)

833.0108 J

Deutsche Erzählungen des 20.

Jahrhunderts/ herausgegeben von K. von Deift. -

Pretoria: Academica, 1981. - 158, [1] p.; 22 cm.

Text in German. - Bibliography: p. [1]

ISBN 0 86874 124 8: R6,50

(82/0957)

839.31364 - 839.3635

Romijn, Aart

Het wonder der jare: Aart Romijn. - 1ste

Suid-Afrikaanse uitg. - Pretoria: Van Schaik,

1982. - 181 p.; 18 cm.

Text in Dutch. - Originally published in the Netherlands

ISBN 0 627 01236 1(pbk): R4,85

(82/2233)

No translated titles

Figure 4.13

Such an accusation of selectivity could easily be refuted if the SANB would consistently supply translations of the titles of all works in languages other than English or Afrikaans.

The policy of supplying a translation of a title in a note is also followed when the SANB occasionally has to deal with a work published in a non-roman script or in a non-western language. See Figure 4.4 for examples.

As the national cataloguing agency, the SANB endeavours, in its annotation policy, to record and reflect the publication history of works that are issued in different versions or editions, that have won prizes or awards, and that have been translated from and into other languages - useful information not necessarily available from the items themselves. See figure 4.14.

439.368
 Eerste beginsels van die Afrikaanse taal.
 En. Fergelykende taalkunde fan Afrikaans en
 Engels/ ingelei deur J.E. Loubser. - Kaapstad:
 Tafelberg vir die Instituut vir Vroeë
 Afrikaans, 1980. - 1v. (verskeie paginerings);
 25 cm. - (Instituut vir Vroeë Afrikaans;
 nr 2)
 Faksim. van: Eerste beginsels van die
 Afrikaanse taal/ uitgegee deur die Genootskap
 van Regte Afrikaanders, 1876 - Fergelykende
 taalkunde fan Afrikaans en Engels/ deur S.J. du
 Toit = Comparative grammar of English and
 Cape Dutch/ by S.J. du Toit, 1897. - Met die
 ondersteuning van die A.D. Keet-publikasiefonds
 ISBN 0 624 01406 1: R9,50
 (81/0091)

821.3ZA
 Mtshali, Oswald (Oswald Mbuyiseni)
 Sounds of a cowhide drum/ Mbuyiseni Oswald
 Mtshali; foreword by Nadine Gordimer. - [New
 ed.]. - Johannesburg: Ad. Donker, 1982. - 92 p.;
 21 cm.
 Originally published: Johannesburg: Renoster
 Books, 1971
 ISBN 0 86852 003 9(pbk): R4,95
 (82/2738)

839.3634
 Leroux, Etienne
 Magersfontein, O Magersfontein!/ Etienne
 Leroux. - Kaapstad: Human & Rousseau, 1976. -
 192 p.; 23 cm.
 Bekroon met die CNA-prys en Hertzogprys. - Ook
 in Engels beskikbaar. - 5de dr. 1981 (R8,50). -
 6de dr. 1982 (R8,95)
 ISBN 0 7981 0696 4

839.3635
 Joubert, Elsa (Elsabé Antoinette
 Murray)
 Die Swerfjare van Poppie Nongena/ Elsa
 Joubert. - 6de dr. - Kaapstad: Tafelberg,
 1982. - 276 p.; 22 cm.
 Bekroon met die Louis Luyt-prys vir
 Letterkunde, die CNA-letterkunde toekenning
 en die W.A. Hofmeyr-prys vir prosa
 ISBN 0 624 01198 4: R10,50

839.3634
 Mikro
 Mattewis en Meraai: die vroeë jare/
 Mikro. - Kaapstad: Tafelberg, c1983. - 165 p.;
 22 cm.
 Die verhale in hierdie bundel het voorheen in
 ander bundels verskyn
 ISBN 0 624 01881 4: R9,95
 (83/2272)

Figure 4.14

4.6 The Principles of Access

The operative principles of access in the SANB are very specifically affected by the structure of the SANB itself. As was pointed out in 4.2, the SANB should primarily be regarded as a finding list; the collocation of all the manifestations of a single work is only possible within the one year period that is allocated to each edition. The other aspect of the collocation function in a catalogue; the bringing together of all the works of a particular author under a single heading for that author, is also suppressed by the SANB as it is a classified catalogue in which the arrangement is according to the Dewey Decimal Classification system, and access to authors, titles

and corporate names is provided by the index.

One may thus state that the SANB can function as an example of a library catalogue in a limited sense only - it should be regarded as a finding list for material published in South Africa, that has been compiled according to the same rules used for catalogue entries in libraries. This has important implications for the principles of access that operate in the SANB.

In this section of the present thesis the researcher proposes to study the recognised principles of access (see 3.2.2) as they operate in the SANB. The constraints imposed by the structure of the SANB will be kept in mind at all times. The topics for discussion are main entry; authorship; corporate entry; geographic names; serials, uniform titles and the subject approach. The researcher selected these topics as it was thought that they illustrate most clearly how the principles of access function in a library catalogue and are practically interpreted by the SANB.

4.6.1 Main entry

From 3.2.2.2 it became clear that the main entry should be seen as the name that has been assigned to a particular work. This name in western cataloguing practice has become very closely linked to the name of the author of that work.

The SANB, however, is a classified catalogue, and consequently the

classification number should properly be regarded as the main entry (Kennedy, 1970: 4). As such a number does not function very well as the name of a work, the SANB adds the prescribed AACR2 main entry to the classification number. This produces a "standard citation" for each work which may function as the name of the work, but which will remain essentially different from a main entry as the catalogue is not arranged around these names (See also 3.2.1.3).

This standard citation therefore does not serve to bring together all the works produced by a single author. This function has been relegated to the index which serves the purpose in a roundabout way only, as it involves an extra step in the searching sequence. It is also no longer a prerequisite for the main entry to collocate all the manifestations of a given work, because this function is already fulfilled by the subject order of the catalogue which will in any case display together works with the same subject. Bibliographic descriptions in the SANB may in other words have been entered under title just as successfully as under author.

In the SANB therefore, the main entry becomes an embellishment, a refinement which is not strictly necessary for the adequate fulfilment of the finding list objective of the catalogue, but which the SANB continues to pursue in the interests of the standardization of high quality cataloguing in South African libraries - one of the important if insufficiently recognised secondary objectives of the SANB.

4.6.2 Authorship

The principle of authorship as it has been incorporated into the AACR2, was discussed in 3.2.1.4. The researcher has chosen the three aspects of the principle of authorship discussed below to illustrate the practical applications of the AACR2 to the SANB. The intention is to show how the SANB approach to the entry of works by authors using pseudonyms or changing their names, to added entries and to corporate main entry may be seen as both an attempt to adhere strictly to the AACR2 and to achieve the limited finding list objective of the SANB.

4.6.2.1 Pseudonyms and Name Changes

In a closely argued article Duke (1980: 80) shows that the AACR2 approach to pseudonyms is neither consistent nor theoretically sound. This approach, according to Duke, tries to fulfill both a finding list and a research function, and does not really succeed at either. On the one hand, the "general principle in the rules dictates entering an author under one form of name 'whether named in the work or not' (21.4A)" (op. cit.: 83; emphasis mine). On the other hand, rule 22.2C3 clearly states that "if a person using pseudonyms is not known predominantly by one name, choose as a basis for the heading for each item the name appearing in it. Make references to connect the names." (Emphasis mine). The AACR2 is inherently inconsistent as it makes an exception to its own principle of entering works by a single person under a single name. The result is that all the works by one author will not be found together in the main author catalogue if the

author uses different forms of name or different pseudonyms for his or her works.

The SANB as a finding list catalogue is not affected by the implications of this inconsistency and is therefore able to follow the rules as they are set out.

Where a predominant name may be discerned, whether that name is a real or a pseudonymous name, that name is chosen as the main entry. (AACR2: 22.2C1 - C2). See figure 4.15.

839.3615
Breytenbach, Breyten
 Lotus/ Jan Blom. - 2de uitg. - Emmarentia
 [Johannesburg] (Posbus 85218, Emmarentia
 2029): Taurus, 1981. - 151 p.: ill.; 21 cm.
 ISBN 0 620 05292 9: R6,90
 (81/3013)

INDEX:

**Boerneef = Van der Merwe, I.W. (Izak
 Wilhelmus)**
Boerneef: Tweetalige skoolwoordeboek:
Afrikaans-Engels, Engels-Afrikaans.
 - 439.36321 **Bosman**
Boerneef: Tweetalige woordeboek: Afrikaans-
Engels; Engels-Afrikaans. - 439.36321
Bosman

839.3634
Boerneef
 Versamelde prosa/ Boerneef; versorg en
 ingelei deur Merwe Scholtz. - 2de dr. -
 Kaapstad: Tafelberg, 1982, c1979. - 508 p.;
 22 cm.
 ISBN 0 624 01190 9: R11,50

(83/2095)

439.36321
Bosman, D.B. (Daniël Brink)
 Tweetalige skoolwoordeboek: Afrikaans-Engels,
 Engels-Afrikaans/ D.B. Bosman, I.W. v.d.
 Merwe; bygewerk deur A.S.V. Barnes. - 8ste
 uitg., 13de dr. - Goodwood: Nasou, 1980. -
 755 p.; 22 cm.
 ISBN 0 625 00962 2: R7,60

(81/0074)

Figure 4.15

When there is no predominant name (AACR2: 22.2C3), each work is entered under the name used for that work, and the works are linked by references in the index. See figure 4.16.

Grobler, Hansie → ook Pretorius, Beyers
 Grobler, Hansie = Van Zyl, M.J.A. (Mathys
 Johannes Adriaan)
 Grobler, Hansie → ook Van Zyl, M.J.A.
 (Matthys Johannes Adriaan)
 Grobler, Hansie: Piet Jakkals → 839.3635
 J Grobler

Figure 4.16

If authors change their names for reasons such as marriage rather than to ensure anonymity as is presumably the case in using pseudonyms, AACR2: 22.2B instructs one to choose the latest form of name unless there is reason to believe that an earlier name will persist as the name by which the person is better known. See figure 4.17.

Coetzee, Magriet → Bouwer, Alba (Albertha
 Magdalena)

808.3
 Mphahlele, Es'kia (Ezekiel L.)
 Let's write a novel/ Es'kia Mphahlele. -
 Cape Town: Maskew Miller, 1981. - 12 p.;
 21 cm. - (Maskew Miller monograph)
 ISBN 0 623 01391 6(pbk): R2,25
 (82/1519)

Figure 4.17

In the second example, however, an (unwitting?) compromise has been made. Es'kia is not an abbreviation of a full name Ezekiel L., but a change of name and the bracketed 'full form' could have been dropped as the author no longer recognises it.

As the only traces of the collocation function of the catalogue are preserved in the index to the SANB where all the forms of name used by a single author are brought together as references, the objectives of this catalogue are not disturbed by the AACR2 approach to pseudonyms.

The SANB attitude to the principle of authorship may thus be seen in

terms of a convenient tag added to a bibliographic description, and which in addition to naming a work gives the "optional information" (AACR2: 22.16A) of providing the full form of a name when part or all of a name is represented by initials on the chief source of information. It does not serve to collocate all the works of an author under the name of the author. Nor does it bring together under a single form of name all the works of a single author who uses different forms of name. The SANB as a national bibliographic agency, sees as part of its purpose the need to list and identify uniquely all South African authors, and thus uses the main entry almost exclusively to fulfil this function of providing the full form of name of an author. And even these full forms of names are repeated in the index, so one may go as far as to state that author entry in the SANB fulfils no other function but to provide standardized AACR2 bibliographic records of works published in South Africa.

4.6.2.2 Added Entries

The SANB explicitly states in the Introduction its policy regarding the added entries that are made to a limited extent in the main classified sequence:

"Added entries in the classified section are normally limited to those items that treat of more than one subject on an equal footing e.g. Handbook of Chemistry and Physics. From 1980, however, it has been decided to include added entries for translations of literature and fiction as a service to users. This means, for example, that items translated into Afrikaans will be listed with Afrikaans literature... as well as with the class number for the original work... Added entries for subject bibliographies are also listed with the subject."

Added entries in the main classified sequence consist of the Dewey number, an access point usually consisting of author and title or title only, together with a reference to the Dewey number and entry word under which the main entry is to be found. The 'added entries' are therefore to be regarded as 'see references' rather than added entries in the often accepted sense of the word which implies that full information would be available from these entries as well as from the main entries.

381.45000294 Hottentots Holland advertiser -- 079.999 Hottentots	574.968 African wild life -- 059.999 G African
381.4562920968 Auto dealers' digest -- 059.999 G Auto	574.968 African wildlife -- 059.999 African
381.4562920968 An Auto dealers digest survey -- 059.999 G Auto	574.968 African wildlife. Afrikaanse uitgawe -- 059.999 G African
381.4562920968 Motor vehicle marketing guide -- 059.999 Motor	574.968 African wildlife. International edition -- 059.999 G African
381.4562920968 Motor vehicle marketing guide -- 059.999 G Motor	574.968 Afrika-natuurlewe -- 059.999 Afrika-natuurlewe
381.4562920968 Ronnie's review -- 059.999 G Ronnie's	

Figure 4.18

If one returns to the discussion on indispensable notes in 4.5.4 and the second, third and sixth examples in Figure 4.12, it also becomes clear that the AACR2 rule 21.30K1 is interpreted more freely than is actually stipulated. According to 21.30K1, added entries should only be made for translators if the main entry is under the heading for a corporate body or under title. If the main entry is under the heading for a person, an added entry should only be made in very specific circumstances, such as when the translation is in verse, important in its own right, has been translated into the same language more than

once, when the translator is also the author, or when the work is otherwise very difficult to find. The SANB makes many more access points for translators that do not qualify for entry under these conditions; but such a practice may be justified by 21.29D which rules that added entries may be made if, in the context of a given catalogue, they are required under headings and titles other than those prescribed in rule 21.30. In the context of a national bibliography such as the SANB it is reasonable to argue that one could need to access local translators who translate works of international origin for the local population.

The researcher therefore wishes to comment that although the "added entries" in the SANB are not 'real' added entries as explained above, the access function has not been impeded. It is at all times possible to find works in the main classified sequence by consulting the index under any of the headings that would have been prescribed by the AACR2, even though this requires an extra step in the search procedure.

4.6.2.3 Corporate Entry

In the discussion of the principles underlying the concept of corporate authorship in library cataloguing (3.2.1.4), the researcher concluded that the AACR2 offers the cataloguer not a new insight into a theory of corporate authorship, but a pragmatic solution to a longstanding problem. Cataloguing experts had never quite succeeded in providing an adequate definition of corporate authorship and a

workable set of principles according to which works of corporate authorship could easily be identified and catalogued consistently. Gorman eloquently argued that the traditional Anglo-American idea that a corporate body can be an author just as a person, is unreasonable, and has resulted in many inconsistent applications. Once one abandons the idea of the corporate author the difficulty changes. It is then possible to discuss the cases in which corporate main entry is useful and the instances in which it is not, "free from the restraint of an untenable theory" (Gorman, 1978: 219).

As a result the AACR2 approach to what used to be regarded as 'works produced under corporate authorship' represents a marked departure from the Anglo-American tradition. The entire concept of corporate authorship has disappeared and in its place one finds a rigidly prescribed set of categories that are reminiscent of Verona's (1975) suggestions to restrict corporate responsibility to more clearly circumscribed situations (see 3.2.2.4). In the AACR2 one has to determine according to these categories whether corporate main entry is relevant or not.

A corporate body as defined by the AACR2 is "an organization or group of persons that is identified by a particular name and that acts or may act as an entity." (AACR2: 565). Such a body may therefore also be responsible for the publication of works dealing with the body itself or its activities, and such works will be entered under the name of the body. The AACR2 has, however, severely limited the concept of corporate main entry and now rules that a work that

emanates from a corporate body may only be entered under the name of that body if the work itself falls into any of the categories listed in 21.1B2.

In a large number of cases where the traditional notion of 'corporate authorship' is involved, it is found that the works do not fall into any of these categories. As it is now no longer possible to enter these works under the name of the body concerned, one either enters under the name of a personal author if one is involved, or under the title, a provision which is used far more frequently in the AACR2 than was the case in the AACR1.

One of the most obvious implications of AACR2's rejection of the concept of corporate authorship in favour of corporate entry was the reduction in the number of works which are entered under the name of corporate body (Gredley, 1980b: 92). This restriction on the use of the corporate heading probably came as a relief to many cataloguers, although it was recognised that certain works with titles that are both distinctive and well-known, sometimes do fall into one of the categories specified in 21.1B2 and could usefully have been entered under title (*ibid.*), rather than the specified corporate body.

Map cataloguers on the other hand, found that maps which might usefully be given main entry under the name of a corporate body frequently do not fall into any of the categories specified in 21.1B2 and thus have to be entered under title in most cases (*op. cit.*: 87).

One may now attempt to look at the practical implications of this pragmatic approach to corporate entry by examining the headings used in the SANB. The following examples, illustrate the problem regarding title main entry for maps where corporate body main entry might have resulted in more immediately accessible headings:

912.68

Visitor's guide to motoring in South Africa [map]: [South Africa]/ compiled and drawn by the Automobile Association of South Africa. - Scale 1:4 440 000. - Johannesburg: The Association, [1980]. - 1 map: col.; 48 x 36 cm. on sheet 59 x 42 cm. folded to 9 x 21 cm.

MN-4

Insets: Cape Peninsula. Scale 1:50 000. - South West Africa/ Namibia. Scale 1: 3 387 500. - Witwatersrand. Scale 1: 925 900. - Contains publicity associations and distance tables. - On verso: general information for tourists on South Africa

Price unknown

912.680016

Aerial photography and 1:10 000 orthophoto mapping [map] Department of Community Development and Auxiliary Services, Surveys and Mapping Branch = Lugfotografie en 1:10 000 ortofoto kartering [landkaart]: Departement van Gemeenskapontwikkeling en Owerheidshulpdienste, Tak Opmetings en Kartering. - Scales vary. - Mowbray (Private Bag, Mowbray 7705): Chief Director of Surveys and Mapping, 1981. - 5 maps on 1 sheet: 38 x 50 cm. or smaller on sheet 84 x 59 cm. folded to 21 x 30 cm.

Index to aerial photographic and orthophoto maps. - Sheet printed on both sides. - Parts: South Africa orthophoto maps = Suid-Afrika ortofoto kaarte. Scale 1:10 000 - South Africa colour aerial photography, 1972-1980 = Suid-Afrika lugfotografie in kleur, 1972-1980. Scale 1:20 000 - South Africa ultra small scale aerial photography = Suid-Afrika ultra-klein skaal lugfotografie - South Africa medium scale aerial photography, 1967-1981 = Suid-Afrika medium skaal lugfotografie, 1967-1981. Scales vary - South Africa small scale aerial photography, 1968-1981 = Suid-Afrika klein skaal lugfotografie, 1968-1981. Scales vary ISBN 0 620 06243 6 (pbk): Index available gratis. Maps only available as ammonia prints (K.S. 5992)

Figure 4.19

This problem was regarded as serious enough to warrant an alteration of the AACR2 itself. In 1982 the JSC published a number of Revisions to AACR2, and a final category was added to 21.1B2:

- f) cartographic materials emanating from a corporate body other than a body that is merely responsible for the publication or distribution of the materials.

As a result works such as in the examples above would be entered under the bodies responsible for them.

In spite of such reservations, however, the AACR2 approach to corporate entry has in general led to clear and findable entries as titles are very often more memorable than the intricacies of corporate names, discussed below.

384.5544

Into the future: a special survey on television. - [Johannesburg (P.O. Box 9959, Johannesburg 2000)]: Financial Mail, 1982. - 40 p., xii p. of plates: ill.; 29 cm.
Cover title. - Running title: Television survey. - Supplement to: Financial Mail, Jan. 29, 1982
ISBN 0 620 05843 9(pbk): Gratis to subscribers (A82/0269)

381.10968 - 338.43000968 S

A Proposed inter-firm comparative approach to labour turnover and aspects of stock shrinkage in the retail industry, 1980/81/ Bureau of Financial Analysis, University of Pretoria. - Pretoria: The University, 1981. - xiii, 113 p.; 26 cm. - (Report; no. A.10 = Verslag; no. A.10)
ISBN 0 86979 471 X(pbk): R10,00 (limited circulation) (82/0888)

538.79687 S

Magnetic observations at SANAE, 1979-1980/ Magnetic Observatory, Council for Scientific and Industrial Research. - Hermanus: CSIR, 1981. - xiv, 76 p.; 30 cm. - (CSIR report; MAG B20)
ISBN 0 7988 2267 8(pbk): Gratis (A82/0582)

574.9205 S

Contributions to oceanography and fisheries biology/ Republic of South Africa, Department of Agriculture and Fisheries, Sea Fisheries Institute = Bydraes tot oseaanografie en visseryebiologie/ Republiek van Suid-Afrika, Departement van Landbou en Visserye, Instituut Seevisserye. - Roggebaai (Private Bag X2, Roggebaai 8012): The Institute, 1981 (Pretoria: Govt. Printer). - 166 p.: ill. (some col.), maps; 24 cm. - (Fisheries bulletin; 15 = Visserye-bulletin; 15)
Synopsis in Afrikaans. - Includes bibliographies
ISBN 0 621 06271 5(pbk) (OP(S) 22/44)

658.300968

The Chief executive's challenge: handling and harnessing labour changes in the '80's: a practical guide for the operating chief executive/ compiled by the Human Resources Management Council of NDMF. - Braamfontein: The Foundation, 1981. - vii, 182 p.; 30 cm.
ISBN 0 908406 35 5: R7,80 (A81/0858)

Figure 4.20

In all the cases illustrated by figure 4.20, one may argue that the title main entry has resulted in simpler, but very 'findable' access.

It is important to emphasise at this stage that the AACR2 has remained committed to the main entry principle (AACR2: 0.5), and the SANB policy has been formulated accordingly, although it has been shown that the SANB does not preserve the main entry for any reason of principle, but rather for reasons which closely resemble the concept of standard citation (see 3.2.2.3 and 4.6.1). Added access points

have at all times to be made for the corporate bodies involved in the above examples so that a user may retrieve the works just as successfully by using the name of the relevant corporate body as a search key, even though the search may take a little longer. In the final example in figure 4.20 above, for instance, the user would first need to look in the index under NDMF (there is no reference under Human Resources Management Council) to find that it stood for National Development and Management Foundation of South Africa and then look under that heading with Human Resources Management Council as a subordinate heading to find a reference to the desired work. The headings for these added access points have thus to be formulated according to exactly the same rules as the main entry headings.

Cataloguers have long been concerned with the problem of corporate bodies changing their names. Unlike personal authors who change their names only rarely and even then still physically remain the same people, corporate bodies may change their names rather frequently - to modernize them, to reflect changes in policy or ownership, or merges or separations. As Maxwell points out, when referring to Lubetzky's Cataloging Rules and Principles (1953), corporate bodies as authors are very different from personal authors. A person, even though his or her name may change, remains the same person, whereas a corporate body that has changed its name has in fact become a different entity (Maxwell, 1980: 340 - 341). These changes in the names of corporate bodies may become very difficult to keep track of, so the AACR2 clearly states that a new entry in the catalogue has to be made whenever an existing body changes its name. Each item will then be

entered under the name that was operative at the time of the publication of that work, and the old name should be linked to the new by means of explanatory references (AACR2: 24.1B). The SANB does not make use of explanatory references, but simply uses the see reference arrow to indicate a change of name in the index, and then enters the relevant items under the name of the body as it appears on the item, as illustrated in figure 4.21.

Meat Board (South Africa: 1980-)
 – Livestock and Meat Industries Control
 Board (South Africa: 1932-1979)

South Africa . Department of Agricultural
 Economics and Marketing (1958-1980)
 – South Africa . Department of Agriculture
 and Fisheries (1980-)

Figure 4.21

Title changes of newspapers and journals are dealt with even more briefly, as illustrated below:

059.999 - 331.702
 Careers supplement. - Vol. 2, no. 10
 (July 1981)- . - Joubert Park (P.O. Box
 23022, Joubert Park 2044): Careers Supplement,
 1981- . - v.; 30 cm.
 Monthly. - Caption title. - Continues: Armed
 forces. Careers supplement
 Gratis

((P) 1178)

Armed forces : Armed forces. Careers
 supplement. – 059.999 G Armed
 Armed forces : Careers supplement.
 – 059.999 Careers
 Armed forces. Careers supplement.
 – 059.999 G Armed

Figure 4.22

Or not signposted at all; see figure 4.23.

Names that do not actually change, but that are found in variant forms present further problems. The form of the name found in the chief source of information, especially if presented formally, is to be preferred to forms found elsewhere in the item (AACR2: 24.2). The AACR2 does not itself adequately define this term "formally", although Maxwell takes it to mean "at the head of the title, in the imprint,

079.999 - 079.682

Krugersdorp news = Krugersdorp-nuus. -
 [Vol. 3, no. 24 (June 1980)]- . - Johannesburg
 (P.O. Box 2878, Johannesburg 2000): Caxton,
 1980- . . . v.: ill.; 42 cm.
 Weekly. - Contributions in English and
 Afrikaans. - Masthead title. - Continues: West
 Rand news = Wesrand nuus. - Description based on:
 Vol. 5, no. 14 (Apr. 16, 1982)
 R0.10 per issue

(K)

Kruger National Park. - 639.90968 Fourie
 Krugersdorp news. - 079.999 Krugersdorp
 Krugersdorp-nuus : Krugersdorp news.
 - 079.999 Krugersdorp
 Kruis of munt. - 813.54 Hayes

079.999 G - 079.682

West Rand news = Wesrand nuus. -
 [Dec. Jan. 1978]-v. 4, no. 23 (June 13, 1980). -
 Krugersdorp (P.O. Box 502, Krugersdorp 1740):
 West Rand News, 1978-1980. - 4 v.: ill.; 43 cm.
 Weekly. - Contributions in English and
 Afrikaans. - Masthead title. - Continued by:
 Krugersdorp news = Krugersdorp-nuus. -
 Description based on: Vol. 4, no. 23 (June 13,
 1980)
 R0.10 per issue

(K)

West Coast poems. - 821.3ZA Wiggett
 West Rand news. - 079.999 G West
 Western, John : Outcast Cape Town
 - 307.209687 Western

Figure 4.23

in the statement of responsibility" (1980: 341). In case of doubt the AACR2 states that one is to prefer a brief form to a full form; but the LC Rule Interpretations published in the Cataloging Service Bulletin have somewhat amended this instruction by stating that if in a body's publications its full form of name and its initials appear together formally, the full form should be chosen for the heading (No. 18: 68). And even if the predominant form is a brief form consisting of initials only, the Rule Interpretations instruct the cataloguer first to refer to the authority file to establish whether there already is a reference or a heading for another body under the same initials. If this is the case, it means that the initials do not 'differentiate' and thus the full form must be adopted as the AACR2 form (ibid.). This point is illustrated in figure 4.24.

FULL FORM:

670.4206068
 Council for Scientific and Industrial
 Research (South Africa) . Production
 Engineering Advisory Service
 The Production Engineering Advisory Service:
 [a service to industry]. - [Pretoria: CSIR,
 1983]. - 11 p.: col. ill.; 30 cm.
 ISBN 0 7988 2677 0 (pbk)

(A83/0644)

continued over/...

BUT:-

Federated Hotel Association of Southern
Africa - FEDHASA (South Africa)
FEDHASA (South Africa) = Federated Hotel
Association of Southern Africa
FEDHASA (South Africa) : Hotel quality
guide. - 645.042024647 Hotel

Figure 4.24

The rule regarding variant forms of name in different languages is of specific importance to South Africa. The first rule is to prefer the form in the official language of the body if there is one. If, however, there is more than one official language, and in South Africa one frequently finds bodies that conduct their business in both official languages, the AACR2 states that one should prefer the English form of the name if one of the official languages is English (AACR2: 24.3A). Individual libraries may possibly wish to change the English to the language of the catalogue if this is not English, but this will again have implications for standardization. The SANB policy in this regard is not to prefer the English form of the name, but to use the name of the body "in the official language appearing first in the chief source of information." (Introduction to the SANB). See figure 4.25.

059.999 - 620.002368
SARPI bulletin: nuusbrieff van die
Suid-Afrikaanse Raad vir Professionele
Ingenieurs = SACPI bulletin: newsletter of the
South African Council for Professional
Engineers. - Nr 1 (Aug. 1979)-
[Johannesburg] (Posbus 61081, Marshalltown,
Johannesburg 2107): SARPI, 1979-
ill.: 30 cm.
Kwartaalliks. - Bydraes in Afrikaans en
Engels - Koptitel

((P) 11953)

059.999 - 370.6068
SATC bulletin: newsletter of the South
African Teachers' Council = SAOR bulletin:
nuusbrieff van die Suid-Afrikaanse
Onderwysersraad. - No. 6 (Feb. 1981)-
Arcadia (Private Bag X26251, Arcadia 0007):
SATC, 1981-
Quarterly. - Contributions in English and
Afrikaans. - Caption title. - Continues: SAOR
bulletin = SATC bulletin
Limited circulation

((P) 11179)

Figure 4.25

Another important problem regarding corporate bodies is the fact that

dependent bodies may evolve from 'parent' bodies and then become responsible for publications in their own right.

Maxwell (1980: 360) analysed the problem by explaining that many corporate bodies are complex organizations surrounded by networks of subordinate and related units. Many such subordinate units conduct their own activities in such a manner that they publish their own works with their own names appearing on title-pages. This results in the problem of selecting consistent and uniform headings for subordinate or related corporate bodies: should the name of such a body appear in the heading as a subheading together with the name of the parent body; or should the heading consist simply of the name of the subordinate body?

In the cataloguing of works produced by bodies with such subdivisions or themselves subdivisions, the cataloguer then has to look at the formulation of the name of the body responsible for the work in hand and decide either that the body has a distinctive name that will identify it uniquely in the catalogue, or that the name indicates some kind of subordination to a higher body. The formulation of the entry will depend on this distinction.

The AACR2 distinguishes five kinds of subordinate bodies that have to be entered as subheadings after the name of the parent or higher body to which it is related. It may be important to repeat here that the headings and names formulated in this way will not always be required as main entries and that they have to be set out according to these

rules for all access points, as illustrated below. One should note, however, that the SANB unfortunately does not list as tracings the added access points made for a specific main entry. Such access points have therefore to be deduced from references in the index, so that these examples may not be as clear as the examples of main entries.

Own name:-

J.L.B. Smith Institute of Ichthyology :
Review of the Indo-Pacific pipefish genus
Doryrhamphus Kaup (Pisces: Syngnathidae).
 - 597.005 S Dawson

Subordinate entry:-

Council for Scientific and Industrial
Research (South Africa) . Technical
Services Department : Kirstein . J.B. (Jan
Bastian) : Report on a technique for the
sand-blasting of images onto glass and
stainless steel objects. - 748.8
Kirstein

National Council for the Care of Cripples in
South Africa . National Cerebral Palsy.
Division : What is cerebral palsy.
- 616.836 What

National Library Advisory Council (South
Africa) . Committee for the Development of
Bibliographic and Information Techniques.
SAMARC Working Group - SAMARC Working
Group

016.657 - 657.016

South African Institute of Chartered
Accountants . Library
List of books held in the library of the
South African Institute of Chartered
Accountants, 1979. - 147 p.; 30 cm.
Cover title
ISBN 0 86083 100 3: Price unknown (limited
circulation)

(A81/0233)

669.10681

Suid-Afrikaanse Yster en Staal
Industriële Korporasie . Komitee van
Ondersoek na YSKOR Aangeleenthede
Report = Verslag: finale verslag van die
Komitee van Ondersoek na YSKOR Aangeleenthede. -
[Pretoria (Postbus 450, Pretoria 0001): YSKOR,
198-?]. - ii, 78, 3 blaaie; 30 cm.
Teks gedeeltelik in Engels. - Omslagtitel
ISBN 0 620 06483 8(pbk) : Beperkte sirkulasie
(A83/0507)

Figure 4.26

In certain cases, however, the SANB seems to have interpreted very widely the AACR2 instructions regarding the entering of bodies under their own names. In the examples in figure 4.27 it would seem as if the names chosen for the following bodies, consist of their own names, with the names of higher bodies involved added as qualifications in round brackets, while the AACR2 suggest entry under the names of the

higher bodies in similar cases. Although examples of such qualifications consisting of the names of higher bodies do appear in rule 24.4C8 of the AACR2, rule 0.14 explicitly states that examples "used throughout these rules are illustrative and not prescriptive". These AACR2 examples may therefore not be regarded as conclusive evidence that such headings are indeed acceptable.

The researcher is therefore of the opinion that the instructions pertaining to the creation of corporate name headings are not entirely clear or unambiguous in the AACR2, and that all the intricacies involved in the formulation of corporate names in actual practice have not been taken into account.

Institute for Communication Research (HSRC,
South Africa: 1968-1979; 1982-) :
Gehooranalise met betrekking tot
gesondheidsvoorligtingsdienste. Zoeloes en
Suid-Sotho's se kennis van en houdings
teenoor enkele gesondheidsaspekte. 'n
— 001.5105 S Lubbe
Institute for Educational Research (HSRC,
South Africa: 1968-1979; 1982-) :
Initial instruction in the second
language. — 370.78068 S Nijse
Institute for Educational Research (HSRC,
South Africa: 1968-1979; 1982-) :
Teachers' views on the Physical Science
syllabuses for secondary schools in the
RSA (Whites). — 370.78068 S Jansen

Institute for Research into Language and the
Arts (HSRC, South Africa: 1982-) :
Leon Maré - verspreide geskrifte.
— 839.3633 Maré
Institute for Research into Language and the
Arts (HSRC, South Africa: 1982-) :
Promotion of literacy in South Africa.
The — 306.4 S Ellis

National Mechanical Engineering Research
Institute (CSIR, South Africa) :
Introduction to the use of carbon fibre
reinforced composite materials for
surgical implants. An — 621.05 Hunt

Figure 4.27

The AACR2 approach to Government bodies and officials is based on the same principles that govern the approach to corporate bodies in general and seems deceptively simple at first glance.

Cataloguing practice up to and including the AACR1 had very complicated rules dealing with government bodies and agencies. The

AACR1 ruled that "agencies through which the basic legislative, judicial and executive functions of government are exercised, should be entered as subheadings under the heading for the government; other bodies created and controlled by the government should be entered, if possible, under their own names." (AACR1: 106). In rule 78 there then followed cumbersome lists of seven types of bodies, with exceptions, to assist in deciding which bodies "whether or not... subordinate to an agency of government" exercised legislative, judicial or executive functions, or whether they should have been entered under their own names.

South African government publications present particular problems to the cataloguer, often caused by the proliferation of government agencies with differing functions, and the bilingual or even multi-lingual presentation of these publications.

The AACR2 rules dealing with government bodies and officials are no longer presented separately, but as part of chapter 24 dealing with corporate bodies, and clearly reflecting the rules dealing with subordinate and related bodies in 24.12 and 24.13. The principle is the same: a government body is to be entered under its own name if the name identifies it uniquely and it does not in some way suggest that the body is subordinate to another. See figure 4.28. If, on the other hand, the name of the government body or agency does include terms that suggest subordination, or that needs the name of the government to identify the agency, the agency should be entered as a subordinate unit under the name of the government.

354.680082 S
Board of Trade and Industries (South
Africa)
Report ...

Natal Parks Board : Natal Bushveld. The
— 599.09684 Natal

Orange-Vaal Administrasieraad :
Begrotingsrede van die voorsitter van die
Orange Vaal Administrasieraad.
— 352.1256 Begrotingsrede

Figure 4.28

But:

354.68007232
Suid-Afrika . Parlement. Gekose Komitee
oor die Rekenings van die Suid-Afrikaanse
Vervoerdienste
Eerste en tweede verslae van die Gekose
Komitee oor die Rekenings van die
Suid-Afrikaanse Vervoerdienste/ op las van die
Volksraad gedruk, Republiek van Suid-Afrika =
First and second reports of the Select
Committee on the Accounts of the South African
Transport Services/ printed by order of the
House of Assembly, Republic of South Africa. -
Pretoria: Staatsdrukker, 1982. - xvii, 76,
17 p.; 30 cm.
G.K. 2-'82: Verslae, verrigtings en
getuienis = S.C. 2-'82: Reports, proceedings
and evidence. - Teks in Afrikaans en Engels
ISBN 0 621 07460 8(pbk): R4,60 (R5,45
buitelands). Posvry

(OP(S) 1)

354.68065
South Africa . Department of Justice
(1910-)
[Annual report]
Report for the period 1 July ...-30 June ... /
Department of Justice of the Republic of South
Africa = Verslag vir die tydperk 1 Julie ...-30
Junie ... / Departement van Justisie van die
Republiek van Suid-Afrika. - 1980/81- . -
Pretoria: Govt. Printer, 1981- . - v.;
ill.; 30 cm.
Text in English and Afrikaans. - Cover title. -
Includes Annual report of the Prison Service.
Continues: Verslag vir die tydperk 1 Julie ...-30
Junie ... / Departement van Justisie van die
Republiek van Suid-Afrika = Report for the
period 1 July ...-30 June ... / Department of
Justice of the Republic of South Africa
R3,90 p.a. (R4,60 p.a. abroad). Post free
(OP(S) 40/1)

354.68068233042
Suid-Afrika . Departement van
Landbou-tegniese Dienste (1958-1980)
Aktiwiteite en prestasies van die Departement
van Landbou-tegniese Dienste. - Pretoria
(Privaatsak X116, Pretoria 0001): Die Dept,
1978. - 28 p.; 30 cm.

(OP(S) 15/105)

354.6829106851
Venda . Department of Education
[Annual report (1974-)]
Report of the Department of Education,
Venda, for the period ... / Venda, Department
of Education, published by authority. -
1974- . - Sibasa (Private Bag X2250,
Sibasa, Venda): The Dept., 1975?- . - v.;
30 cm.
Continues: Annual report/ Department of
Education and Culture
Gratis (limited circulation)
(OP(S) Venda 9)

354.68292065
GazanKulu . Department of Justice
Annual report ... / GazanKulu Government,
Department of Justice. - 1979/80- . -
[Giyani] (Private Bag X575, Giyani 0826): The
Govt., 1980- . - v.; 30 cm.
Report year ends 31 March. - Cover title
(OP(S) GazanKulu 7)

354.68491007231
KwaZulu . Legislative Assembly. Sessional
Committee on Public Accounts
Minutes of the meeting of the Sessional
Committee on public accounts of the KwaZulu
Legislative Assembly held on 3-5 May, 1982 at
Ulundi. - Ulundi: KwaZulu Govt. Service, 1982. -
63 p.; 21 cm.
Cover title: Report of the Sessional Committee
on the accounts of the KwaZulu Government for
the financial year 1980/81. - Also available
in Zulu/Afrikaans
(OP(S) KwaZulu 4)

354.687920683
Ciskei . Department of Manpower
Utilization
Annual report of the Department of Manpower
Utilization/ published by authority, Republic of
Ciskei. - 1981- . - [Zwelitsha] (Private Bag
X426, King William's Town 5600): Ciskei
Government, [1982]- . - v.; 30 cm.
Cover title. - Continues: Annual report of the
Ciskeian Public Service Commission
(OP(S) Ciskei 6)

Figure 4.29

One solution to the problem of multi-lingual government publications in a given catalogue is to enter them all in the language of the catalogue, irrespective of the language of the title proper, thus ensuring that a single heading in the catalogue will reflect all publications of that body. If this method is chosen, it will be essential to ensure that adequate references are made, linking the names of the body in other languages to the name of the body in the language of the catalogue. A fully automated catalogue will probably not need to adopt this solution, but will be able to produce full catalogue entries instead of references under the heading in any of the languages used. The SANB enters multi-lingual works in the language of the title proper, and refers in the index to the names in the other languages, thereby ensuring a fully bilingual approach to the catalogue.

This study of the AACR2 approach to corporate entry and the SANB applications of the rules has shown that title main entries which are frequently the result of the application of rule 21.1B2, provide very findable access points for works emanating from corporate bodies.

For cases where works do qualify for entry under the name of the corporate body according to 21.1B2, the AACR2 does provide instructions for the formulation of such names, but unfortunately these instructions are not always clear and unambiguous enough to provide completely consistent headings. One may cautiously conclude, therefore, that the category-based approach of the AACR2 to that old "cataloguers' bogey of corporate authorship" (Verona, 1975: vii) has

shown that this most difficult cataloguing problem may indeed be solved by a pragmatic interpretation. A study of the SANB interpretation of the AACR2 has however also shown that the rules themselves are not sufficiently clearly formulated to prevent the creation of inconsistent headings. Carpenter's doubts about the ultimate justification of this approach (see 3.2.2.4) should therefore not be dismissed.

4.6.3 Geographic Names

Problems of access in the SANB are not limited to questions of entry and authorship as discussed in 4.6.1 and 4.6.2. The AACR2 very specifically prescribes how certain access points should be constructed, and an analysis of the rules for geographic names, serials and uniform titles together with their SANB-interpretations would continue the testing of sub-hypotheses (iii), (iv) and (v) in this chapter.

AACR2 chapter 23 Geographic Names is often used in conjunction with the section on government bodies and officials, as geographic names are commonly used as headings for governments, as well as to distinguish between corporate bodies with the same name and as additions to other corporate names (AACR2: 23.1). Anderson (1982: 32) pointed out that the two parts of the general rule 23.2A on geographic names seems basically contradictory. While the first sentence instructs one to use the English form of the name of a place if one is in general use, the second sentence instructs that if there is any

doubt the vernacular form should be used. The use of the vernacular does not, however, logically follow from the first part of the rule, which seems to be based on an incorrect premise: that gazetteers published in English-speaking countries will give the English form of a place name rather than a local or vernacular form. Anderson claims (ibid.) that a test was done which did not substantiate this assumption.

The likeliest cataloguing problems to arise with reference to South African geographic names will probably be concerned with the names of independent Black States and towns in those states which are often 'difficult' and involve unusual spelling. As these states are also often not politically recognised by other countries, their names may well not appear in "gazetteers and other reference sources published in English-speaking countries" (AACR2: 23.2A) apart from in South Africa itself.

The SANB entries involving geographic names may therefore be regarded as authoritative from the South African point of view, but problems could presumably arise in an international situation if an "English form in general use" (AACR2: 23.2B) may be changed to a politically 'unrecognised' vernacular form. (For example, the name of the town Mafeking has been changed to Mafikeng by the independent state of Bophuthatswana. Will this affect the interpretation of "in general use"?) One may also add that the SAMARC format lists (Appendix A and Addendum to Appendix E) the South African Provinces, Homelands and Independent Areas as well as Geographic Areas for Southern Africa that

may be accepted internationally, thus standardizing these names, but those lists do not include names of towns.

Geographic names are frequently used as additions to corporate names. According to rule 24.4C2, one is instructed that if a body has a character that is national, state, provincial, etc., one is to add the name of the country, state, province, etc., in which it is located. Rule 24.7B4 instructs one to add the name of the local place to the name of a conference, congress or other meeting. Figure 4.30 illustrates how these rules are applied by SANB.

- 306.4
Literacy Conference (1978: Johannesburg)
 Literacy in South Africa: proceedings of the Literacy '78 Conference convened by the Human Sciences Research Council, Johannesburg, July 1978/ edited by Temple Hauptfleisch; South African Institute of Languages, Literature and Arts. - Pretoria: HSRC, [1978]. - 157, [8] p.; 21 cm. - (Publication; no. TLK/Lit 1)
 ISBN 0 86965 686 4: R3,35
 (82/1599)
- 306.87
Simposium oor Doeltreffender Ouerskap
 (1980: Port Elizabeth)
 Simposium oor doeltreffender ouerskap, in Port Elizabeth op 1980 09 24-1980 09 26 = Symposium on better parenting, at Port Elizabeth on 1980 09 24-1980 09 26. - Johannesburg: SA Nasionale Raad vir Kinder- en Gesinsorg, 1980. - 88 p.; 30 cm
 Referate in Afrikaans en Engels. - Omslagtitel. - Bevat bibliografiese verwysings
 ISBN 0 949983 17 9: R1,50
 (A82 0132)
- 307.096811
Symposium on Settlement in Botswana (1980: Gaborone)
 Proceedings of the Symposium on Settlement in Botswana: the historical development of a human landscape/ edited by R. Renée Hitchcock and Mary R. Smith. - Marshalltown (P.O. Box 61581, Marshalltown, Johannesburg 2107): Heinemann Educational Books in collaboration with the Botswana Society, c1982. - xvi, 401 p.; maps; 24 cm.
 Held at National Museum, Gaborone, Botswana, Aug. 4th-8th, 1980. - Bibliography: p. 383-401
 ISBN 0 620 05767 X(pbk): R25,00
 (82/1616)
- 354.6800818
Blacks Resettlement Board (South Africa)
 [Annual report (1979-80-)]
 Annual report ... / Republic of South Africa, Blacks Resettlement Board, published by authority = Jaarverslag ... Republiek van Suid-Afrika, Raad vir die Hervestiging van Swartes, uitgegee op gesag. - 1979; 80- - Ferreirasdorp, Johannesburg (Private Bag X1, Ferreirasdorp 2048): The Board, 1980- - v.; 30 cm.
 Continues: Annual report ... / Republic of South Africa, Blacks Resettlement Board, published by authority = Jaarverslag ... Republiek van Suid-Afrika, Raad vir die Hervestiging van Bantoes, uitgegee op gesag. - Two sections arranged top-to-tail
 Voorsetting van: Annual report ... / Republic of South Africa, Blacks Resettlement Board, published by authority = Jaarverslag ... Republiek van Suid-Afrika, Raad vir die Hervestiging van Swartes, uitgegee op gesag. - Twee dele rug-aan-rug gerangskik
 Gratis
 (OP(S) 19.2)
- 362.73209684
Aryan Benevolent Home . Children's Home (Chatsworth). Board of Management
 Children in care: children's new home, Arena Park, Chatsworth, 1 December 1979/ Board of Management, Aryan Benevolent Home. - Mayville, Durban (186 Bellair Rd, Mayville 4091): The Home, [1980]. - [44] p.; ill.; 30 cm.
 Cover title
 Gratis
 (A81/0657)
- 362.86820968
National War Fund (South Africa)
 Holding their heads high: the work of the National War Fund. - Johannesburg (P.O. Box 8648, Johannesburg 2000): The Fund, 1980. - 45 p.; ill.; 30 cm.
 Gratis
 (A81/0012)

Figure 4.30

It is interesting to note that SANB invokes rule 24.4C2 when the main entry is English, but not if it is Afrikaans, presumably because Afrikaans titles are regarded as unique, whereas confusion could arise in an international network situation between, e.g. the Citrus Boards or Canning Fruit Boards of different countries. See figure 4.31.

354.68007232

Oilseeds Control Board (South Africa)

Report of the Auditor-General on the accounts of the Oilseeds Control Board for the financial year 1 July 1978 to 30 June 1979/ published by authority, Republic of South Africa = Verslag van die Ouditeur-generaal oor die rekenings van die Oliesadebeheerraad vir die boekjaar 1 Julie 1978 tot 30 Junie 1979/ uitgegee op gesag, Republiek van Suid-Afrika. - Pretoria: Govt. Printer, 1980. - 20 p.; 30 cm. RP 89/1980. - Cover title. - Parallel text in English and Afrikaans
ISBN 0 621 06013 5: R2,39 (R3,00 abroad).
Post free

(OP(S) 24/18)

354.68007232

Piesangraad

Verslag van die Ouditeur-generaal oor die rekenings van die Piesangraad vir die boekjaar ... / uitgegee op gesag, Republiek van Suid-Afrika = Report of the Auditor-General on the accounts of the Banana Board for the financial year ... / published by authority, Republic of South Africa. - 1975/76- . - Pretoria (Privaatsak X85, Pretoria 0001): Staatsdrukker, 1976- . - v.; 30 cm. Verslae het RP-nos. Verslagjaar eindig 30 Junie. - Jaarliks. - Omslagtitel. - Voortsetting van: Verslag van die Ouditeur-generaal oor die rekenings van die Piesangbeheerraad vir die boekjare 1957/58-1974/75
ISBN 0 621 06800 4: R2,80 (R3,40 buitelandse).
Posvry

(OP(S) 24/4)

354.680082333

Aartappelraad

[Jaarverslag (1954-)]
Verslag vir die boekjaar geëindig ...
Aartappelraad. - 1954- . - Pretoria (Privaatsak X135, Pretoria 0001): Die Raad, 1954- . - v.; 30 cm.
Verslagjaar eindig 30 September. - Ook in Engels beskikbaar. - Beskrywing gebaseer op: 1978
R1,00 p.j. (beperkte sirkulasie)

(OP(S) 16/22)

354.680082333

Canning Fruit Board (South Africa)

[Annual report (1969/70-)]
Report for the financial year ... up to and including ... / Canning Fruit Board, Republic of South Africa. - 1969/70- . - Paarl (P.O. Box 426, Paarl 7620): The Board, 1969/70- . - v.; 30 cm.
Cover title. - Also available in Afrikaans. - Description based on: 1974/75

(OP(S) 16/23)

354.680082333

Citrus Board (South Africa)

[Annual report (1961/62-)]
Annual report by the Citrus Board covering the period ... = Jaarverslag van die Sitrusraad vir die tydperk ... - 21 st (1961/62)- . - Pretoria (180 Visagie St., Pretoria 0001): The Board, 1962- . - v.; 30 cm.
Published separately in Afrikaans and English (1961/62-1973/74). - Description based on: 1979/80. - Report year ends 31 January
Afsonderlik in Afrikaans en Engels uitgegee (1961/62-1973/74). - Beskrywing gebaseer op: 1979/80. - Verslagjaar eindig 31 Januarie

Figure 4.31

4.6.4 Serials

"The Basic premise behind the treatment of serials in AACR2 is that seriality is a publication pattern, not a bibliographic condition, and consequently the Joint Steering Committee for the Revision of AACR2 decided that a separate rule for serials was unnecessary. Which just goes to show that theory is fine but shouldn't be allowed

to interfere with practice." (Currie, 1982: 12).

The AACR2 devoted a separate chapter (12) to the bibliographic description of serials, but as far as access is concerned, serials were regarded as no different from other library materials, and did not warrant any separate rules for entry and access. Currie should therefore have said "a separate rule for the entry of serials was unnecessary." Her point however, remains valid. Serials present some very specific problems, frequently because of "that peculiar quality that distinguishes serial publications from monographs: their tendency to change." (Turner, 1981: 27).

The AACR2 rules on corporate entry have resulted in large numbers of serials that used to be entered under corporate body according to AACR1, to be entered under title. Currie (1982: 17) succinctly explained the implications of AACR2 Rule 21.1B2 by saying that unless a serial is obviously an annual report, formal minutes, a university calendar or handbook, one should be careful, as it is quite likely that it will have to be entered under title. See figure 4.32 below and on page 122.

059.999 - 614.0968

Community health in SA: official journal
of the Institute of Public Health = Volksgesond-
heid in SA: offisiële blad van die Instituut
vir Openbare Gesondheid. - June (1979)- . -
[Edenvale, Johannesburg (P.O. Box 1633,
Edenvale 1610)]: The Institute, 1979- . -
v.: ill.; 30 cm.
Monthly. - Cover title. - Description based
on June 1979
Maandeliks. - Omslagtitel. - Beskrywing gebaseer
op Junie 1979
Price unknown = Prys onbekend
(P) 11681)

059.999 - 624

Computers in Civil Engineering, ...
symposium/ SA Institution of Civil Engineers
in conjunction with Concrete Society of Southern
Africa. - 1979- . - Halfway House
(P.O. Box 168, Halfway House 1685): The Society.
1979- . - v.; 30 cm.
Annual. - Cover title
Limited circulation

((P) 11722)

059.999 - 658.88

The Credit manager: official journal of the Institute of Credit Management in Southern Africa = Die kredietbestuurder: amptelike joernaal van die Instituut van Kredietbestuur in Suidelike Afrika. - Vol. 1, no. 4 (Winter 1980)- . - Johannesburg (P.O. Box 6482, Johannesburg 2000): The Institute, 1980- . - v.: ill.; 30 cm.
 Cover title. - Continues: Credit. - Includes bibliographies. - Quarterly
 Omslagtitel. - Voortsetting van: Credit. - Bevat bibliografieë. - Kwartaaliks
 R0,75 per issue == R0,75 per eksemplaar
 ((P) 11596)

059.999 - 354.6870085

Cultura: Noordkaap. [streeknuusbrief: Departement van Nasionale Opvoeding, Tak Kultuurbevordering]: Northern Cape: [regional newsletter: Department of National Education, Branch for the Advancement of Culture]. - Jrg. 1, nr 1 (Sept. 1979)- . - (Kimberley Privaatsak X5004, Kimberley 8300): Die Departement, 1979- . - v.; 21 cm.
 Kwartaaliks. - Omslagtitel
 Quarterly. - Cover title
 Gratis (beperkte sirkulasie) == Gratis (limited circulation)

((P) 11723)

Figure 4.32

Entry under title often causes two kinds of problems for the cataloguer: what to do with generic titles, and changes of title. The AACR2 (21.2) gives clear guidance as far as title changes are concerned. Whenever a serial changes its title, a separate catalogue record has to be made; not an added entry or cross reference as was stipulated by the old ALA rules. A title change is considered to have taken place as soon as the 'title proper' has changed. As far as generic titles are concerned, the situation is not quite so simple. According to Turner (1981: 32) generic titles were not problematic under AACR1; they had to be entered under the name of the corporate body, and if a title added entry had to be made, it was subarranged by the name of the body. Turner regards it as ironic that while AACR2 greatly extends the use of title main entry to include even generic titles, it provides no method for dealing with the problem of titles proper which are identical, but which appear in different bibliographical items.

This is not a simple problem in a large catalogue. When titles proper are identical, these entries have to be "subarranged by data elsewhere

in the bibliographic record" (ibid.). As far as generic titles are concerned, their main distinguishing feature is the name of the body responsible for them. This information may appear in the statement of authorship area, or in the 'other title information,' neither of which is in the title proper. Human filers would find it difficult enough to use this information to subarrange a file of generic title main entries; a computer would find it entirely impossible (ibid.).

As the AACR2 had failed to suggest a solution to this problem, the Library of Congress and the National Library of Canada came together to try and find a solution. Cole explains (1981: 75) how these two Libraries then formulated guidelines for uniform titles for serials (also called unique serial identifiers) in order to attempt to solve the problem. Instructions to formulate such unique serial identifiers were published in the Cataloging Service Bulletin no. 11, and another version appeared in no. 12, which read:

"Create a uniform title for a serial... entered under title if the title proper of the serial is identical to the title proper of another serial in the catalog... Note that the uniform title created is used not only as the main entry heading on the bibliographic record for the serial itself but also whenever the serial is referred to in other access points..." (25).

One should keep in mind that these unique titles, although similar to Uniform Titles, should not have been confused with them. Turner (1981: 34) clearly states that the two "are diametrically opposed in purpose. The uniform title was developed to bring together various manifestations of a single work that would otherwise be dispersed by their individual titles; the Unique Title is intended to differentiate

titles which would otherwise be the same."

It is therefore most unfortunate that this confusion is perpetuated by the L.C. Rule Interpretations which also refers to unique titles as "uniform titles." Such a distinction is too valuable to be lost.

It should also be noted that Revisions (1982) to the AACR2 provides a revised enumeration of the instances in which uniform titles should be provided in a catalogue. The new rule 25.2A(3) reads: "... (use a uniform title for an entry for a particular item if) the title used as the main or added entry heading for a work needs to be distinguished from the title used as the main or added entry heading for a different work." It would thus appear that the AACR2 will use the term "uniform title" for both uniform and unique titles, although Revisions as yet give no official instructions for the construction of these new uniform titles.

A perusal of SANB entries for serials makes it clear that a serious need existed for the formulation of such identifiers to be added to generic titles even though current serials are entered once only and the serials listed in any one year edition of the SANB will reflect only a small section of all the serials currently published in South Africa, as is illustrated in figure 4.33.

The unique serial identifiers, or uniform titles, in the above examples consist of the title proper, followed by the name of the issuing corporate body formulated as if it were a catalogue entry, in

059.999 - 614.59

Bulletin (Genetiese Dienste)
 Gesondheid: Genetic Services, Department of
 Health. - No. 1, 1979- . - Pretoria (Privaat-
 sak X88, Pretoria 0001): Die Dept,
 1979- . - v.; 30 cm.
 Halfjaarliks. - Deurlooptitels: Genetic Ser-
 vices Bulletin = Genetiese Dienste Bulletin
 Gratis

((P)S) 33/13)

059.999 - 070.5 - 028.55

Bulletin (Instituut vir Navorsing in
 Kinder- en Jeuglektuur)
 Bulletin van die Instituut vir Navorsing in
 Kinder- en Jeuglektuur = Bulletin of the
 Institute for Research in Children's
 Literature. - Vol. 1, nr 1
 (Aug. 1979)- . - Potchefstroom (Instituut
 vir Navorsing in Kinder- en Jeuglektuur,
 Potchefstroomse Universiteit vir CHO,
 Potchefstroom 2520): Die Universiteit,
 1979- . - v.; 21 cm.
 Halfjaarliks. - Omslagtitel. - Ook in Engels
 beskikbaar
 Gratis (beperkte sirkulasie)

((P) 11834)

059.999 - 079.68

Bulletin of the Rhodes Journalism
 Department. - No. 1 (Jan./Feb. 1979)- . -
 Grahamstown: Department of Journalism, Rhodes
 University, 1979- . - v.; 21 cm.
 Irregular. - Incorporating the Press Club
 Gratis (limited circulation)

((P) 11979)

059.999 - 907.40687

Bulletin (Suid-Afrikaanse Kultuur-
 historiese Museum)
 Bulletin van die Suid-Afrikaanse
 Kultuurhistoriese Museum = Bulletin of the South
 African Cultural History Museum. - No. 1
 (1980)- . - Kaapstad (Postbus 645, Kaapstad
 8000): 1980- . - v.; ill.; 24 cm.
 Jaarliks
 R2,00 per eksemplaar (gratis aan biblioteke en
 universiteite)

((P) 11758)

059.999 - 372.9684

Newsletter (Ntumeni State aided Indian
 School)
 Newsletter/ Ntumeni State aided Indian
 School. - 1978- . - Ntumeni (P.O. Box 257,
 Ntumeni 3830): The School, 1978- . - v.;
 30 cm.
 Annual. - Cover title
 Gratis

((P) 3249)

059.999 - 362.12

Newsletter (Primary Health Care Education
 Resource Centre, University of the
 Witwatersrand)
 Newsletter/ Primary Health Care Education
 Resource Centre. - No. 1 (Dec. 1978)- . -
 Bertsam, SA (c/o Baragwanath Hospital, P.O.
 Bertsam 2013): The Centre, University of the
 Witwatersrand, 1978- . - v.; 30 cm.
 Cover title
 Gratis (limited circulation)

((P) 9044)

059.999 - 025.525096

Newsletter (SASDI)
 Newsletter = Nuusbrief/ SASDI. - 1- . -
 Pretoria (P.O. Box 395, Pretoria 0001): SASDI,
 1975- . - 21 cm.
 Full name of SASDI: South African Selective
 Dissemination of Information. - Irregular. -
 Some contributions in Afrikaans
 Volle naam van SASDI: Suid-Afrikaanse Selektiewe
 Disseminasie van Inligting. - Ongereeld. -
 sommige bydraes in Afrikaans
 Gratis to subscribers = Gratis aan intekenaars

((P) 11279)

059.999 - 372.9684

Newsletter (Sezela State Aided Indian
 Primary School)
 Newsletter/ Sezela State Aided Indian Primary
 School. - Dec. 1979- . - Sezela (P.O. Sezela
 4215): The School, 1979- . - v.; 30 cm.
 Annual. - Cover title
 Gratis (limited circulation)

((P) 11782)

Figure 4.33

parentheses. Without these it would have been extremely difficult to
 file these entries consistently.

4.6.5 Uniform Titles

As suggested above, uniform titles "provide the means for bringing

together all the catalogue entries for a work when various manifestations (e.g., editions, translations) of it have appeared under various titles." (AACR2: 25.1). An individual cataloguing agency is left free to decide to what extent uniform titles need to be made, and in a catalogue such as the SANB which lists individual items as they are published and does not need to address itself to the collocation function of the catalogue, the need to provide uniform titles for works other than serials is rather small. In addition, items to which uniform titles are frequently applied; music and material published before 1500 are, with the exception of Biblical works; infrequently catalogued by the SANB. See figure 4.34.

220.52	225.53936
Bible . N.T. English. Today's English.	Bybel . N.T. Afrikaans. 1979-vertaling.
1981	1981
Good News New Testament. With, The Psalms. -	Die Nuwe Testament. En, Die Psalms:
Today's English version, 1st South African ed.	1979-vertaling. - 2de uitg. (verkleinde formaat)
(British usage). - Roggebaai: Bible Society of	[d.i. 1ste uitg.]. - Roggebaai: Bybelgenootskap
SA, 1981. - 285 p.; 11 cm.	van SA; 1981. - 979 p.; 11 cm.
Index	ISBN 0 7982 0280 7(pbk: verkleinde formaat):
ISBN 0 7982 0306 4(pbk): R0,75	R0,75
(82/1531)	(82 1664)

Figure 4.34

Other works, e.g. those to which may be assigned uniform titles under AACR2 25.9 - 10 comprising selections, or collections of works in one form, by a single author, are not assigned uniform titles, as these are clearly not warranted by the specific requirements of the SANB. See figure 4.35 below and on page 127.

839.3613 J	839.3613
Leipoldt, C. Louis (Christiaan	Leipoldt, C. Louis (Christiaan Louis)
Frederik Louis)	Versamelde gedigte/ versorg deur J.C.
Die Issiegrimmiebonso: 'n keur van sy beste	Kannemeyer. - Kaapstad: Tafelberg, 1980. -
kinderverse en-verhale/ C. Louis Leipoldt;	556 p.; 22 cm.
saamgestel deur Pieter W. Grobbelaar; en met	Uitgegee in samewerking met die Afrikaanse
'n voorwoord deur I.D. du Plessis;	Diens van die Suid-Afrikaanse Uitsaaikorporasie
[illustrasies deur Deirdré du Toit]. -	by geleentheid van die Leipoldt-fee in 1980. -
Kaapstad: Tafelberg, 1980. - 81 p.; ill.; 23 cm.	Alfabetiese register van eerste reëls
ISBN 0 624 01363 4: R6,25	ISBN 0 624 01290 5 (pbk): R15,00.
(81/0401)	(81/0217). - ISBN 0 624 01411 8 (linne)

continued over/...

839.3633 J
Langenhoven, C.J. (Cornelis Jacob)
 Brolloks en Bittergal: wonderstories vir die
 kindertjies/ C.J. Langenhoven; met illustrasies
 deur Cora Coetzee. - Nuwe uitg. - Kaapstad:
 Tafelberg, 1982, c1977. - 105 p.: ill.; 23 cm. -
 Oorspronklik uitgegee: 1925 (illustreerder: A.
 Fries). In 1974 opgeneem in DI 5 van Die
 Versamelde Werke van Langenhoven as die 15de
 uitg. - ISBN 0 624 01005 8
 2de dr. - R5,50. (82/1894)
 3de dr. - R6,50. (82/2329)

839.3633 J
Langenhoven, C.J. (Cornelis Jacob)
 Jantjie Muis en Jakob Slang en ander
 verhaaltjies/ C.J. Langenhoven; met illustrasies
 deur Cora Coetzee. - Nuwe uitg.; 2de dr. -
 Kaapstad: Tafelberg, 1982, c1976. - 81 p.:
 ill.; 23 cm.
 Hierdie verhale het as drie afsonderlike boeke
 in 1931 verskyn en is later opgeneem in DI 5
 van Die Versamelde Werke van Langenhoven
 ISBN 0 624 00941 6: R6,50
 (82/2328)

Figure 4.35

4.6.6 The Subject Approach

The AACR2 does not address the problem of subject access at all, and strictly speaking the topic is therefore not relevant to the present study. The researcher is, however, of the opinion that a few brief comments would be in order, as a subject arrangement is basic to the SANB and provides the primary access points in all cases. These comments, may, moreover serve as a valuable springboard for approaching the library catalogue from the point of view of the user, which will be continued in chapter 5.

The arrangement of entries in the SANB is according to the nineteenth edition of the Dewey Decimal Classification with the exception of the 496 (African Languages) and 896 (African Literatures) classes. For these classes a special schedule, compiled by D. Fivaz and P.E. Scott, is used in conjunction with Dewey (Introduction to SANB).

The main sequence of texts in classified order is preceded by a "Guide to the main classes of the the Dewey Decimal Classification" which consists of a two page list of the main Dewey numbers with headings,

and a separate list of numbers and headings in Afrikaans. Apart from the numbers for African Languages and Literatures which are given with their subdivisions, the Dewey numbers represent the classes of the 'second division' only (i.e. 100, 110, 120, 130 etc.) There is no other subject index; the Introduction clearly states: "There is no alphabetical subject index: subject access is via the summary of the Dewey schedules." It is therefore entirely impossible to find subject headings for very many of the subdivisions of the main classes, as the main classes give no indication to the untrained user that the subdivisions may be part of those specific main classes.

This arrangement immediately raises serious questions about the use of the SANB as it practically precludes direct access to the main sequence of entries in the bibliography. No untrained user can be expected to know his or her way around an unindexed Dewey sequence, and will find great difficulty in attempting a subject search, in spite of the classified order of the entries.

The headings themselves are open to question as well. The headings are frequently too long and verbose, and the minute subdivisions of the numbers of the individual entries are meaningless without any subject guide. A single example should suffice; there are very many others:

Heading: 305 SOCIAL STRATIFICATION (SOCIAL STRUCTURE). Some of the individual entries under this heading bear the following numbers: 305.42096; 305.69710687; 305.831006068; 305.89240684; 305.896327.

(from SANB 1982). These numbers are nowhere interpreted or explained.

The translations of the headings into Afrikaans are at times questionable as well. 338.2 ECONOMICS OF MINERAL PRODUCTS/MYNBEDRYF. 623 MILITARY AND NAUTICAL ENGINEERING/GENIEWESE; SKEEPSBOU. 658.4 EXECUTIVE MANAGEMENT/ROL, FUNKSIES ENS VAN DIE BESTUURSPERSONEEL.

The translations are not always clear equivalents, and little known words are not valuable as subject headings.

The researcher is not going to attempt a discussion of the Dewey numbers themselves; in a publication of the calibre of the SANB one would assume them to be of a high standard. What should be questioned is whether the arrangement according to the Dewey Decimal Classification without adequate subject indexing is at all useful.

From this brief discussion it is clear that the SANB is not easy to use, and even a trained librarian needs to use it in conjunction with the three volumes of the DDC in order to make sense of the arrangement. The researcher would like to suggest that the lack of a subject index to the headings used in the main sequence is a serious shortcoming in the SANB.

4.7 The Problem Areas

The study of the principles of cataloguing, and their application in the SANB has shown that the SANB may be regarded as a rigidly

structured catalogue that manifests to a large extent a conservative interpretation of the AACR2, without displaying much regard for the potential user to the catalogue, who frequently needs to approach the catalogue obliquely (see 4.6.1), has to follow a chain of references before the required entry is found (see 4.6.2.3), or needs to consult the full edition of the Dewey Decimal Classification (see 4.6.6) before a subject search can be attempted. The SANB may therefore be regarded as an example of the kind of catalogue that may be produced by using the AACR2, in spite of its being hampered by difficulties of access arising from an inadequate index and overburdened referencing structure that are not a consequence of using the AACR2.

The SANB, as a model of AACR2 cataloguing, may thus also be seen as to a large extent an example of what may be achieved through our modern cataloguing principles; and the analysis of the problem areas of cataloguing throughout chapter 4 has shown to what extent the AACR2 is able to provide solutions to these problems.

The investigation into the foundations of cataloguing practice with reference to the actual cataloguing in the SANB, which was conducted in this chapter, has led the researcher to conclude that certain problem areas in cataloguing as we practise it today, have remained. Many of these problem areas have been discussed in the literature, and while the AACR2 has produced some fresh interpretations, which have in some cases provided improved access to entries in catalogues, other problems still remain unsolved.

In summary the researcher therefore wishes to conclude that:

- (i) As far as the bibliographic description of library materials is concerned (see 4.5), the AACR2 has brought an integrated approach which allows for the uniform description of all library materials and as such presents to a large extent a solution to an old problem area in library cataloguing.
- (ii) The General Material Designation (see 4.5.1) has not generally been accepted as a useful device for warning users that the record they are looking at, may be in a form other than the usually expected monograph.
- (iii) The discussion on multi-lingual works in general and the use of the parallel title in particular (see 4.5.2; 4.5.2.1) has shown that the AACR2 does not present the final answer to the difficulties that may crop up in works with two or more languages.
- (iv) Annotation (see 4.5.4) was shown to be a problem area from the point of view of the SANB rather than the AACR2 which allows the cataloguer a considerable degree of freedom in the interpretation of the rules. Problems in annotation arise mainly from the frequent occurrence of texts published in languages other than the official languages of the SANB. Further complications arise when added access points are not traced with the main entries in the SANB.

- (v) The question of the main entry (see 4.6.1) is an old and thorny problem area in the history of cataloguing, and the AACR2 has not yet finally solved it, although its importance has been diminished by both the AACR2, which recognises that computerised catalogues may function quite successfully without the traditional concept of a main entry, and by the SANB which assigns main entries primarily because they are prescribed by the AACR2, in order to provide standard citations for the works published in South Africa.
- (vi) By eliminating the concept of corporate authorship (see 4.6.2.3), the AACR2 brought about a new and pragmatic approach to the old problem of entering works under the names of the corporate bodies responsible for these works. An analysis of the SANB interpretation of the AACR2 shows that these rules work fairly well and that 'findability' does not seem to suffer because of the rejection of an old 'principle'. An adequate referencing structure would in any case ensure 'old style access' under the name of the corporate body, whether that name is the main entry or not.
- (vii) One of the significant remaining problems in the AACR2 seems to concern the formulation of the names of corporate bodies. This difficulty originates from the complex and organic structure of organizations and their subordinate bodies, but the AACR2 does not provide instructions that adequately and

unambiguously address all the problems that may occur.

- (viii) The AACR2 has probably caused rather than solved a problem by ruling that the English forms of geographic names (see 4.6.3) in general use should be preferred to the vernacular forms. Such English forms of name may become obstacles in large international networks where records from countries of origin may conflict with records produced elsewhere.
- (ix) The problems of serials cataloguing (see 4.6.4) have not yet been finally solved by the AACR2, especially as the AACR2 makes no provision for the unique identification of serials with generic titles, and the solution produced by the LC Rule Interpretations seems to create further confusion. A study of SANB entries of serials with generic titles has shown that the AACR2 rules as they stand are quite inadequate for the effective organization of a serials file.

It may therefore be concluded that the AACR2, designed to solve the problems of access and description of library materials encountered in the modern world, is a flawed but nevertheless workable attempt at circumscribing the practical problems of cataloguing from the point of view of the cataloguer. An analysis of the practical applications of the rules has brought one to a closer understanding of the actual problem areas, and has shown that none of the problems that remain are particularly serious or insurmountable in terms of the principles of cataloguing. It thus brings one back to Gorman's statement that

AACR2 was intended to be both a summation of the best of traditional cataloguing practice and a plateau from which we could survey the future (1982a: 241). The SANB, too, may be seen in a very real sense as a culmination of present day cataloguing practice interpreted through the specifically South African point of view, and as such a plateau from where future possibilities may be surveyed.

With reference to the main hypothesis in 1.2 one may therefore state that the nature of the construction of a library catalogue has hitherto been a somewhat one-sided process emphasizing problems based on principles of cataloguing without very much explicit attention being paid to the users for whom these catalogues are intended. In the next chapter the researcher wishes to look more closely at the users for whom all this effort in constructing catalogues is expended. This will be done in an effort to test the sub-hypotheses (vi) and (vii), and to prove that this one-sided approach to the construction of a library catalogue has precluded a general, encompassing theory of cataloguing which circumscribes the phenomenon of cataloguing in its entirety.

5. THE CATALOGUE AND ITS USERS

5.1 Catalogues for Users

No investigation and evaluation of the principles and practice of cataloguing could be regarded as complete without an analysis of the requirements and expectations of the user of the catalogue. The catalogue is, after all, produced not for the curious edification of librarians, but for the prospective and potential users of the library who come to it needing to make use of the resources contained within its collections. Duke (1980: 79) quite succinctly stated that it was possible to understand the system of principles underlying the rules of cataloguing by looking at the users for whom they are compiled. White (1981: 318) said that in order to find out how we should catalogue, we need to go back to our original reasons for cataloguing and to consider how much difference minute and detailed decisions actually make. He presumed that catalogues are compiled according to perceived user needs, but stated that studies are lacking about what those needs are, and what the users prefer.

One may assume that the user comes to the library with a certain knowledge of what s/he requires from the library. Such a user then approaches the catalogue and attempts to 'communicate' his or her requirement in order to obtain the information.

The concepts of communication and of information have in recent years been the subject of much discussion among librarians (Ehlers, 1971;

Kesting, 1977; Belkin, 1978; Fokker, 1979). In this thesis the researcher does not wish to investigate the various definitions that have been proposed with reference to the technical, the semantic and the effectiveness problems of interpretation of communication (Weaver, 1959: 96). These aspects have exhaustively been dealt with by Smith (1981: 8 - 27). For the purposes of this study information will be contrasted with knowledge and defined very succinctly in the terms used by Foskett (1982: 1 - 2):

"knowledge is what I know
information is what we know"

or in other words "knowledge is restricted to the individual who gains it while information is knowledge shared by communication." (ibid.). In this sense recorded knowledge, i.e. a record of "what I know", becomes information by being communicated; and a library is a repository for such recorded knowledge or information.

The concept of communication will then also be defined very simply in the words used by Shera (1972: 83) as "a mode of interaction between or among two or more individuals".

The instrument through which the user attempts to communicate, the catalogue, consists of a gigantic list of material available in the library, to which has been added, through the so-called collocation function, a very basic facility for 'question answering'. The cataloguer decides at the time of cataloguing that a specific work will be accessed by author, title, subject, etc., and therefore

NB
↓

predetermines a number of set questions that will cause that work to be retrieved in answer. When the user therefore approaches the catalogue in order to obtain information, it is assumed that the information is available in the catalogue, ready to be retrieved by the user who only needs to ask the correct questions from the catalogue in order to find the needed information. The user, in his or her attempt to ask a question from the catalogue, does not actually communicate with the catalogue itself, but with the cataloguer who had decided upon both the questions and the answers at the cataloguing stage. The catalogue in other words acts as the channel for the communication of the information. This channel may be used for communication between "here" and "there" (transmission); or between "now" and "then" (storage) (Hamming, 1980: 29).

In order to make use of the information received from the catalogue, the user has to internalize and to process it, just as the cataloguer had to process information taken from the work that was being catalogued and turn it into a bibliographic record for that work. Such processed information is known as knowledge: "what I know" from the definition above. One may therefore postulate that the catalogue is a representation of the knowledge that the cataloguer recorded about each library item at the time of cataloguing, and that the user then has to retrieve that information which will in turn augment his or her own knowledge.

5.2 Artificial Intelligence and the Catalogue?

The researcher now wishes to investigate the concepts of

communication and knowledge from the point of view of the science of Artificial Intelligence (AI) which also concerns itself with these ideas. Winograd (1983: 8) justifies such a method of applying the findings of a new and rapidly expanding field of study to an existing one by stating that a researcher may be strongly affected by other fields of study that currently enjoy successful development. Either consciously or unconsciously, the successful field of study is taken for a model, and there is a metaphorical imposition of its ideas regarding the kinds of questions that need to be asked and the kinds of answers that should be accepted.

The older models of communication, such as the linear model of Shannon and Weaver (1959: 5, 98) and the cybernetic model of Wiener (1948: 132 - 133) have been concerned with mathematical solutions to these problems, and are regarded as having been seminal in information research. These models were very restricted, however, and have been incorporated into newer models such as those used by AI research.

In addition the researcher realizes that librarians using the classical Shannon-Weaver model (Fokker, 1979: 47 - 50; Stevenson, 1980: 152 - 155) have found it too limited in its library applications to be ultimately useful. Essentially both Fokker and Stevenson stated that a communication system consists of an information source, a message that is encoded into a system that renders it suitable for signalling, the signal itself which may be disturbed by noise, a decoding system and a receiver. This thesis accepts that the catalogue may be regarded as such a communication system, but the

researcher wished to use a model that would provide a more detailed explanation of the problems involved in the cataloguing situation. In addition the researcher required a model that would assign a more active role to the user of the catalogue. (The passive role assigned to the receiver of the communication according to the classical Shannon-Weaver model was pointed out by Smith (1981: 45)). A new model was therefore found in the realm of AI research which has provided more comprehensive explanations for problems of communication.

AI research is a developing science concerned with computer systems that are capable of performing 'intelligent' tasks such as talking and reading and analysing complex structures. In attempting to build such systems, scholars in different disciplines such as linguistics, psychology and the natural sciences have spent a lot of time trying to understand the nature of knowledge and communication, and their interpretation of these concepts may assist one in understanding the nature of the catalogue; itself a representation of knowledge, as was shown in 5.1.

Winograd, whose work has been "particularly influential in the development of AI ideas on natural language processing" (Handbook of Artificial Intelligence: 230) described language as a "process of communication between intelligent active processors, in which both the producer and the comprehender perform complex cognitive goals" (1983: 13). To elucidate this, he produced a diagrammatic representation of a model for co-operative communication which may be adapted,

see figure 5.1, to represent co-operative communication in the cataloguing situation:

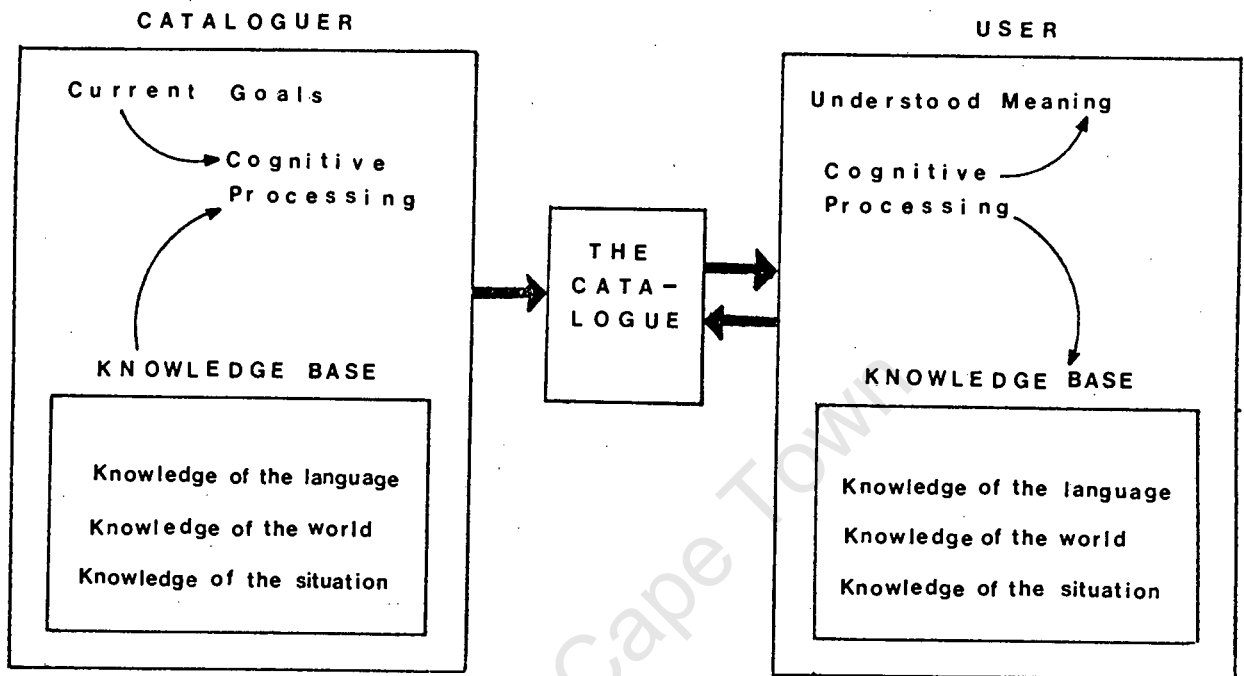


Figure 5.1

The cataloguer and the user do not communicate directly, but through the medium of the catalogue which functions as the channel of communication. The researcher is aware that the original catalogued work may also be regarded as a channel of communication between the creator of the work and the reader. This study, however, will concentrate on the subsystem of the total communication process which centers around the catalogue as the channel of communication between the cataloguer and the user.

The cataloguer, keeping in mind the functions required of the catalogue and using his or her knowledge about the catalogue,

intellectually manipulates information entering the library in order to produce a catalogue record. Such a whole body of relevant knowledge is known as a knowledge base (Winograd, 1983: 15). The knowledge base of the cataloguer consists of the general knowledge that s/he has of the language, and of the much more specific knowledge of the construction of the catalogue and its rules of compilation; and of the materials held in the library. It may also be noted that this process of compiling the catalogue could be regarded as a form of encoding according to the classical communication model, but the researcher prefers to regard it in terms of the AI concepts of frames and slots, which will be discussed in 5.4.

Chapter 3 has dealt with the producer of the catalogue and the act of cataloguing from the theoretical point of view. The functions of cataloguing have been considered, and the cataloguing 'world' and 'situation' (the library materials and the rules that deal with them) that make up the specific components of the knowledge base from which the cataloguer operates, have been discussed. It now becomes necessary to look at the catalogue from the point of view of the user of this complex construction, the catalogue.

According to Figure 5.1, the user approaching the catalogue also needs a knowledge base consisting partly of very specific information regarding the catalogue, in order to comprehend fully the structure and content of the catalogue and the information it has available. If this knowledge base in the user were then inadequate or lacking, it is obvious that the cooperative communication would be severely impeded.

At this stage it is essential to clarify the relationship between the knowledge base of the cataloguer and the catalogue itself (see Figure 5.1). It was stated in 5.1 that the catalogue is a representation of the knowledge that the cataloguer has of both the materials in the collection and the rules of the catalogue. As such the catalogue is not itself a knowledge base, but a rigidly structured representation of knowledge or a data base (see 1.4) that may provide a user who is able to communicate with it, with useful information.

5.3 Knowledge and the Catalogue

A good deal of research has in recent years been done by eminent philosophers and information scientists on the nature of knowledge. Popper regarded knowledge "as consisting of our theories, our hypotheses, our conjectures; as the product of our intellectual activities." (1976: 85). Ziman, considering scientific knowledge, regarded it as "the product of a collective human enterprise to which scientists make individual contributions which are purified and extended by mutual criticism and intellectual cooperation. According to this theory the goal of science is a consensus of rational opinion over the widest possible field" (1978: 3).

In keeping with the intention set out in 5.2, however, the researcher proposes to investigate the contribution of AI on this topic. AI research does not proceed from a "fundamental philosophical issue of what knowledge is" (Handbook of Artificial Intelligence: 144), but chooses instead to regard somebody's knowledge pragmatically in terms

of his or her ability to behave intelligently (op. cit.: 143). A person or a robot knows how to play bridge or to understand a language or to manipulate an instrument if the ability to do these things is manifested (ibid.).

According to AI, there are three stages involved in the use of knowledge, i.e. to manifest the ability to do something. The three stages required for the processing of information into knowledge are as follows: (a) more knowledge has to be acquired; (b) facts that are relevant to the problem in hand have to be retrieved from the knowledge base, and (c) these facts have to be reasoned about in search of a solution (Handbook of Artificial Intelligence, 1981: 145).

These three stages are particularly important in an analysis of the cognitive processing that takes place when a user uses the catalogue.

The user approaches the catalogue with a certain amount of knowledge regarding the problem in hand - an author or title or subject is known and then used as access points for the search: knowledge acquisition involves relating something new to what is already known (ibid.). Knowledge cannot be acquired in a vacuum, it has to be related to previous knowledge and be able to interact with it.

Retrieval in the sense of (b) above does not only encompass the global act of retrieving required information from the catalogue, also very specifically establishing what is relevant - very important when the system 'knows' many different things (op. cit.: 146). The user does not necessarily need all the information under a certain

access point; the relevant information has to be retrieved from much that is not directly applicable or irrelevant to the problem that the user has brought to the catalogue.

The amount of reasoning that is required depends on the nature of the original question. When the system is required to do something that it has not been explicitly told how to do, it must reason - it must figure out what it needs to know from what it already knows (ibid.).

It is important to emphasise that these stages in the cognitive processing of knowledge are interrelated and do not take place separately. When it is acquiring new knowledge, the system must at all times be concerned with how that knowledge will be retrieved and used in reasoning at a later stage (op. cit.: 147).

5.4 Frames and Slots

In order to study the relationship between the library catalogue and the knowledge it represents, it became necessary to investigate the various 'knowledge representation schemes' developed by AI research, which would assist one in understanding more clearly the nature of knowledge and the structure of knowledge bases which "if used in the right way... will lead to 'knowledgeable' behavior." (op. cit.: 143). Two of these schemes are analogical representations and frame theory. In the researcher's attempt to find the scheme most suitable for application to the library catalogue, the analogical representation at

first appeared appropriate. Analogical representations have the characteristics of tolerance, continuity, analogy and simulation (Ballard and Brown, 1982: 320) that seem directly relevant to the library catalogue which consists of a long series of records representing (analogy; simulation) the items contained by the library. Upon further investigation, however, the similarity broke down. The analogical representation, also known as the direct representation, (Handbook of Artificial Intelligence, 1981: 200) has to be an immediate image - like the representation of objects such as maps, models, diagrams, and sheet music (ibid.) that "capture continuous, analogical, sensory, or holistic types of phenomena implicated in imagery and perhaps other areas of cognition and thought." (Pylyshyn, 1978: 34).

A more useful scheme of knowledge representation that could be applied to the analysis of the data structure that is the library catalogue presented itself: known as the frame, it is the AI knowledge-representation scheme that has most recently been developed and as such is still in its early stages of development (Handbook of Artificial Intelligence, 1981: 158).

The concept of the frame was introduced by Minsky who defined it as:

"a data structure for representing a stereotyped situation... Attached to each frame are several kinds of information. Some of this information is about how to use the frame. Some is about what one can expect to happen next. Some is about what to do if these expectations are not confirmed. We can think of a frame as a network of nodes and relations. The 'top levels' of a frame are fixed, and represent things that are always true about the

supposed situation. The lower levels have many terminals - 'slots' that must be filled by specific instances or data." (Minsky, 1975: 118).

Catalogue records may be seen as fixed into frames. The Handbook of Artificial Intelligence (1981: 216) described frames as providing a structure or framework within which new data may be interpreted or encoded in terms of concepts acquired through previous experience. Each new catalogue record provides new data which has to be fitted into the framework or structure according to predetermined rules. The 'top levels' of the frame that are fixed and are always true about the situation may be seen as those elements that one would always expect from a catalogue entry: that it should describe and identify a work uniquely, establish the responsibility for the work and give some indication of the subject matter.

The slot then becomes the place where knowledge fits into the larger context that has been created by the frame (ibid.). These slots could correspond to the 8 'areas' of bibliographic description in the AACR2 (see 4.3), and fulfil the requirement that "the number and type of slots for a particular type of frame are immutable and specified in advance." (Ballard and Brown, 1982: 334).

In the catalogue frame, the frame has attached to it information regarding the use of the catalogue and the kind of information one could expect from the catalogue. The user knows or is assumed to know how the catalogue works, and from his or her previous experience with catalogues has certain expectations regarding the kind of information to be found in the catalogue and what to do if the required

information does not turn up immediately.

Collections of related frames are then linked together into frame-systems which are linked in turn by an information retrieval network. When a proposed frame cannot be made to fit reality - this network provides a replacement frame (Minsky, 1975: 118).

Such a system of linking is a common feature of library catalogues - Cutter referred to the syndetic structure of the catalogue. The entries are linked together - in a card catalogue through cross references and in an on-line catalogue through a much more sophisticated linking system whereby subordinate and related records are joined together in such a way that they may be called up together as required.

One may therefore state that a catalogue consists of a complex network of frames that are linked together and which provides a way of organizing the large amounts of knowledge (Handbook of Artificial Intelligence, 1981: 222) contained within the catalogue.

5.5 The User as Decoder

If one returns to Figure 5.1 something else becomes clear. The catalogue contains a representation of the knowledge base of the cataloguers that compiled it. The catalogue user, therefore, has to sift through, choose from and arrange knowledge from this expression of a collective knowledge base in the catalogue. But this is not all.

The diagram shows that for the user to be able to understand the meaning of the catalogue his or her own knowledge base has to be utilized as well. The user acts as the comprehender or decoder of information that was processed or encoded by a cataloguer through his or her own knowledge base. If this information is now to be processed into knowledge of the user, another knowledge base is involved; the relevant knowledge that the user has of the catalogue. And if the meaning understood by the user is to reflect that intended by the cataloguer, the knowledge base of the cataloguer has at least to resemble that of the user. The user in other words also has to have certain knowledge about the catalogue and its structures: for the user to be able to display 'knowledgeable behaviour' as a result of his or her interaction with the catalogue, the user's frames should be able to match up with the frames in the catalogue. One now has to ask whether this is indeed the case.

Compilers of catalogues and catalogue codes have always assumed that catalogues are compiled for the use and convenience of the user, and that they are, perhaps with a certain amount of guiding, simple and easy to use. Hickey (1977: 269) called the catalogue a "self-service tool". Cutter had stated that the convenience of the public is to be placed before the ease of the cataloguer at all times (1904: 6). At the same time very little real attention was ever paid to the actual rather than the imagined needs of the users, and to the construction of a body of relevant knowledge about the catalogue in the user so that the user may utilize catalogues more successfully.

Fussler and Kocher (1977: 239) noted that despite the escalating increases in library expenditures and substantial increases in library resources, there has been evidence in recent years indicating that a variety of user needs remain unfulfilled. In fact, they feel, serious informational needs exist in our society that are not being met satisfactorily by libraries as they exist today.

Library users are not aware of the intricacies of cataloguing rules. The studies that have been done suggest consistently, according to Tate (1980: 120), that the user of the author-title catalogue is looking for a specific document. Not many are interested in bibliographic data. In the light of data so far discovered, Tate stated, one has good reason to believe that the author-title catalogue is used to locate the known item. One does not know how often the literary unit is the object of the search, or the purposes for which it might be sought. Nor does one know whether entries organized into a literary unit help or hinder the patron in his or her search for the known item.

Much of the time and effort spent on cataloguing is therefore expended on the construction of a representation of knowledge, the value and use of which has never been ratified.

The knowledge that the user brings to the catalogue seems to be of the simplest in bibliographic terms: names of personal authors and titles with the titles more likely than the names to be complete and correct. (op. cit.: 120 - 121). Tate also noted the distinct unwillingness of

the user to look beyond at most three places in the catalogue for the required information if the first approach was not successful, and suggested that users often seem lacking in the basic cataloguing skills such as filing (op. cit.: 122 - 123). Stevenson (1980: 142) noted that user failure at the catalogue is often caused not by the access points themselves, but by the complex structure of headings, which cause users to miss entries even if they exist in the catalogue.

Martel (1981: 6) summarized this state of affairs by saying that users may actually have been ignored in the construction of library catalogues. The users are not consulted in the construction of catalogue codes, and there does not in some cases even seem to be a clear distinction between library staff members and users of the catalogue.

One is in other words dealing here with a clear breakdown in communication. The intended comprehender is not in a position to understand clearly the 'messages' that the producers-cataloguers are attempting to put across in the catalogue, as the knowledge base of the user is too limited to be able to use and interpret the received message adequately. The knowledge that the user brings to the catalogue is not sufficient to exploit the complex instrument, the catalogue, to the extent to which it was intended.

5.6 Solution by Enhancement?

The solution to this problem seems to be tied up with both computer

technology and a basic principle of the function of the catalogue.

We have noted that the function of the library catalogue may be seen in terms of a finding list, and an instrument for collocating related works in the library. It has become apparent that users of traditional catalogues usually approach the finding list function and that they are often not particularly successful at it, apparently at least partly because access points are constructed according to rules that obscure rather than enhance findability. The extent to which the collocation function is approached seems obscure, according to Tate who conducted a survey of published catalogue use studies in 1979. "Unfortunately the studies have not been designed to find the number of patrons who deliberately seek all the works of an author or all the editions of a work... We do not know how often the literary unit is the subject of the search, or the purposes for which it might be sought." (1980: 120).

Studies of catalogue use in South Africa have not been designed to test this kind of problem either. A study conducted by Hills (1981) did attempt to establish the extent to which a particular catalogue was used, but seemed to regard the catalogue largely in terms of a finding list, concluding that an abbreviated catalogue consisting of the elements author, title, location mark, subject number and date, could provide an adequately useful library catalogue (op. cit.: 127). Hills did note, however, that users frequently had difficulties even in using the catalogue as a finding list (op. cit.: 121), thus illustrating the inadequate knowledge base of the user.

The researcher would like to suggest that the collocation of the literary unit is not fully used because the users are not adequately equipped to use the catalogue to answer such questions. If the catalogue cannot even be relied upon to fulfill the simpler finding list function, the more apparently complex problems such as the display of related materials may not even be attempted. The researcher would like to suggest that such a study in which an attempt is made to discover to what extent the collocation function is approached by library patrons should be most useful and informative in this regard.

It has been shown that computer technology has brought with it a vast potential for expanding the usefulness of the catalogue. It may do this by increasing the other function of the library catalogue, the collocation function; at the same time also enhancing the finding list function and so making the catalogue seem more reliable to the user. By being able to provide many more access points than the traditional catalogue, and through the facility for broadening and narrowing searches, the computerised catalogue may gain the confidence of the user regarding the finding list function.

One of the most important facilities brought about by the new generations of computers is that of providing much more flexible and wide-ranging access to data bases than was the case with traditional catalogues. With the computer-based catalogue the library patron no longer requires exact information to determine whether the

bibliographic item that s/he wants is actually in the library (Di Maio & Jensen, 1983: 258). This does not mean that the exact information should not be there in the catalogue; simply that users no longer need to know the exact title or name of an author, or how the name of a corporate body was formulated, and still be able to retrieve the required information. In some systems truncations of entries may be used to access the catalogue. And once the catalogue has become a truly reliable finding tool, it may also and at last become what it was always intended to be: an instrument capable of displaying all the relationships (and even potential relationships) between all the works in the library. Gorman calls this the "phase of enhancement" of the on-line catalogue which should be introduced once the on-line catalogue performs at least as well as the ideal traditional catalogue. (1982b: 474). Once this "minimalist phase" has been passed, the on-line catalogue may go beyond being an information retrieval system and truly become the tool of the future. The functions of the catalogue will then no longer be limited to simple finding and collocation; the kind of information retrieval that one expects from a catalogue, but may be vastly enhanced by the addition of the kind of information at the moment being disseminated by indexing and abstracting services, and even by the inclusion of critical and evaluative assessments that librarians have hitherto tended to avoid. Hickey (1977: 268) pointed out that librarians have steadfastly refused to provide qualitative judgements about the strengths and weaknesses of certain types of materials - information that could in certain circumstances be both useful and valuable.

Winograd's explanation (1983: 24) of the difference between text retrieval and true question answering then becomes applicable to the traditional versus the new enhanced catalogue as well. In text retrieval the system has to decipher what information the user of the system requires, and then to respond by sifting through the data base and identify the relevant documents. In question answering the system attempts to generate answers to specific questions based on stored information. The new enhanced catalogue could be capable of much more than document retrieval: it could become a powerful, informed and critical reference source in its own right.

The catalogue of the future should therefore become more than the bibliographical instrument that we have become used to. Exact bibliographic identification and citation will still be essential - indeed, the flexibility of approach may increase the need for a systematic identification of works (Van Houten, 1981: 370) - but the library catalogues could come to resemble more closely and even improve on the already existing products of the commercial abstracting and indexing services (Williamson, 1982: 124).

And ironically, this increase of the knowledge base input into the catalogue will diminish that discrepancy between the knowledge base of the cataloguer-producer and that of the user-comprehender in Figure 5.1.

It was made clear that the knowledge base consisted firstly of knowledge of the language, which may be assumed to be similar in

cataloguer and user; of knowledge of the situation, which we interpreted as knowledge of the catalogue and its rules of compilation and arrangement; and knowledge of the world, of the information-containing materials in the library.

When the on-line catalogue is enhanced as suggested above, what happens is that the new knowledge input into the knowledge base is knowledge of the "world". When free text abstracts, more subject descriptors and other access points are added to bibliographic descriptions one is not increasing rule-based cataloguing information, but knowledge about the subject, which the user also has. The user comes to the catalogue with a problem or question, and knows at least enough about this question or problem to recognise a satisfactory solution. In enhancing the "knowledge of the world" or the subject information in the catalogue, thus ensuring that the efficient use of the catalogue is less dependent upon the complex structure of the catalogue itself, the user's inadequate knowledge of cataloguing rules and principles recedes in importance, and s/he may confidently approach the communication with the catalogue as more of an equal. Stated differently: "A catalogue should be constructed in such a way that it reflects the methods of use of the majority of our users and makes use of the information that they bring with them to the catalogue." (Ayres, 1981: 4).

5.7 The Way Ahead

The researcher has now discussed in considerable detail the

principles on which cataloguing has been based, and has offered an explanation, using certain principles from AI research, for the reasons why users do not find catalogues as useful as they should. In spite of this, one has come no closer to a simple, all-encompassing 'theory of cataloguing' which could explain clearly and simply how we should and do catalogue.

The reason for this, one would like to suggest, is that cataloguing should be seen as essentially a technology rather than a science in its generic context. The two are, according to Price, (1972: 172) formally identical; the difference lies in the fact that technology produces a product or a process - something tangible and useful - while science should be seen as a method of achieving an awareness and understanding of certain phenomena that may be used in the formulation of explanations about the phenomena (Busha & Harter, 1980: 4). Science produces "a paper" (Price; op.cit.) technology some desired thing. Sciences produce theories as ends in themselves; when one deals with technology, which needs to produce some tangible product, it is often more useful to talk of problem solving. This concept is obviously very applicable to cataloguing, and it is much more apt to see the library catalogue and the process of cataloguing as a series of problems, rather than in terms of a scientific quest for a theory. This approach is borne out by Busha & Harter (ibid.) who state that librarianship has even traditionally been a problem-orientated field in which librarians have tended to emphasise practical rather than theoretical issues. The AACR2 may then be seen as the latest in a long line of attempts to solve the frequently intractable problems

inherent in the library catalogue and bibliographic control.

Cataloguing itself has always been subject to change, and catalogue codes to criticism. The critics have shown, over and over again, that the AACR2 is hardly perfect, but also that being "hooked on controversy and pettifogging argument" (Gorman, 1982a: 241) about the AACR2 has not lead to anything more constructive. Computers have enabled librarians to produce physically different catalogues; inherently these catalogues have not changed. Williamson (1982: 123 - 124) saw quite clearly that by providing new physical formats for the catalogue, they still remain essentially the same: nothing but prototypes of those of Cutter of 1904.

The researcher has attempted to point out that the principles of cataloguing were not actually changed by the computer (see 3.2.3), they merely became inadequate. The problem areas in the application of cataloguing rules that were discussed and analysed in chapter 4, exist independently from the computer as well. And yet the computer is still almost generally regarded as the 'solution' to the catalogue. This is also not possible. Cochrane (1981: 31) showed conclusively that this attitude of 'technological change for its own sake' will not increase the quality of information retrieval, only change it, resulting in new equipment and new users but not better service.

The computer in other words cannot by itself be the solution to the problem space of the cataloguing technology which has been the subject of this study. The study has shown that fairly small difficulties

only remain in the preparation of a catalogue according to the latest rules that are available, but it also became clear that users are unable to make full use of these catalogues because they do not bring to the catalogues an adequate base of knowledge regarding the construction of the catalogue. Librarians have long regarded the catalogue as a "self-service tool"; users have been reluctant to show their ignorance in the face of something which they are so obviously expected to be able to handle for themselves.

The researcher would therefore like to suggest that the basic problem of the catalogue is to be sought in this discrepancy between what the librarian puts into the catalogue and expects the user to be able to find, and what the user thinks should be in the catalogue, but cannot trace. This split will not be bridged by further revisions of the Anglo-American Cataloguing Rules; the knowledge base of the user is inadequate regardless of the specific rules employed to construct the catalogue. Catalogues as we know them will have to change and expand; this time not for the sake of improving or refining the existing principles of cataloguing, but with the users of the catalogue in mind.

6. CONCLUSION

To conclude this study the researcher proposes to review briefly the hypotheses stated in chapter 1.2 and to relate them to the conclusions that were reached by the study.

The historical and theoretical study of the development of library catalogues and the rules for the construction of catalogues showed that until 1949 rules for the construction of catalogues were not exclusively based on principles, but also incorporated numbers of specific rules for specific cases (see 2.1; 2.2). During the early 1950's an increasing demand was made for cataloguing rules that would be based entirely on principles (see 2.3), and the two editions of AACR that were published in 1967 and 1978 attempted to codify (see 2.4 - 2.6; chapter 3) these principles. It was also shown, however, that these efforts were not entirely successful, so that one may amend sub-hypothesis (i) to state that cataloguing rules reflect the endeavour to base these rules on principles.

As far as sub-hypothesis (ii) is concerned, it has to be stated that although the AACR2 reflects an attempt to codify the principles of cataloguing, an important traditional principle, viz. corporate authorship, has not been included in the Rules (see 3.2.2.4). A pragmatic solution similar to the earlier "specific rules for specific cases" has been incorporated instead, so that it is not possible to state that the AACR2 is entirely based on principles of cataloguing.

Sub-hypotheses (iii), (iv) and (v) were investigated in chapter 4. It was shown that SANB entries may indeed be regarded as examples of bibliographic records constructed according to the AACR2, even though the format of the SANB does not require the preservation of the main entry principle (see sub-hypothesis (iv) and 4.6.1).

As far as sub-hypothesis (iii) was concerned, the researcher had expected to find many instances of deviation from standard AACR2 prescription to accommodate specifically South African problems. Such deviations did not materialise to any considerable extent. The most remarkable exception to AACR2 policy is the fact that the SANB continues to catalogue Afrikaans items in Afrikaans (see 4.5.2), does not prefer the English form of a name if one of two official languages is English (see 4.6.2.3), and regards the separate title pages of items in two languages bound back-to-back as parallel titles (see 4.5.2.1).

Sub-hypothesis (v), which surmised that certain cataloguing problems remain unsolved by AACR2 has been proved and the findings summarised in 4.7. These problems are not particularly large or insurmountable from the point of view of the established principles of cataloguing, but they are still responsible for difficulties in catalogues constructed according to AACR2.

In chapter 5 the researcher attempted to address sub-hypothesis (vi); that traditional catalogues are not fully serviceable from the point of view of the user. This was found to be the case, as the researcher

could show that the flow of communication between the cataloguer and the user of the catalogue breaks down because the knowledge base of the user is too limited to permit adequate utilization of the catalogue.

The final sub-hypothesis, (vii), that the established principles of cataloguing are inadequate for the construction of computer catalogues, was considered in 3.2.3 and 5.6 - 5.7 of the present study. The researcher concluded that the established principles of cataloguing do not allow for the expansion of catalogues in the directions now being made possible by developments in computer technology. Library catalogues at the moment are still limited to bibliographic descriptions, to which are affixed access points relating to the creative responsibility for the items, subject description and location information. Indications are, however that this limited view could be changed to incorporate vastly enhanced subject description into library catalogues. If this were indeed to take place, the existing principles of cataloguing will have to be expanded to meet the demand. The researcher does however realise that these considerations fall outside the scope of the present study and would like to recommend that a separate study into the feasibility of enhancing library catalogues in the directions suggested by this study (see 3.2.3 and 5.6) could valuably be conducted.

The main hypothesis posed at the beginning of this study was that a broad, encompassing theory of cataloguing does not exist. This hypothesis has now been proved, as no single theory has been suggested

which is capable of encompassing the library catalogue in its entirety (see 3.3). The theoretical foundations of the library catalogue have been shown to consist of a number of fundamental propositions or principles which do not circumscribe completely the cataloguing phenomenon. This study has also shown, however, that cataloguing is a problem solving activity that aims to produce a product, a catalogue, according to consistent principles which have been examined and discussed in detail. These principles alone have, however, not enabled cataloguers to produce highly usable catalogues. The users of the catalogue have to a considerable extent been neglected in the construction of catalogues, and difficulties experienced by users have not been incorporated into the principles according to which catalogues are constructed. One may therefore state that a comprehensive theory of cataloguing which is able to provide a rationale for the library catalogue, its construction and its users, does not exist today.

At the same time the researcher wishes to suggest that the most important direction for the evolution of cataloguing, does not at the moment lie with the development of such a theory which again may rely too heavily upon form and technique. This study has shown that the present principles of cataloguing are inadequate for the creation of maximally useful and usable catalogues. The library profession finds itself at a crossroads in the development of catalogues today. An over-assiduous search for theory is inappropriate at a time when the first requirement is to establish what exactly it is that users want from catalogues, how they use them and how they would like to use

them. It is suggested that a pragmatic and problem-solving attitude is the only feasible way in which to deal with a technology, and it is proposed that cataloguing is such a technology.

The researcher therefore wishes to recommend that a penetrating investigation into user requirements will have to be conducted in order to establish what exactly users require from library catalogues and whether the enhancement of catalogues will indeed solve their problems as they themselves see them. Such a study will have to form the basis for the principles according to which computer technology will most successfully be applied to library catalogues. A search for such principles, based on user needs, should be a first priority if the library catalogue is to become a vital and viable instrument for the foreseeable future.

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APPENDIX
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